

CREDIT OF THE NATIONS

CREDIT OF THE NATIONS

A STUDY OF THE EUROPEAN WAR

BY

J. LAURENCE LAUGHLIN, PH.D.

EMERITUS PROFESSOR OF POLITICAL ECONOMY IN THE UNIVERSITY OF CHICAGO

LONDON

P. S. KING & SON, LTD.

ORCHARD HOUSE, WESTMINSTER

NEW YORK

CHARLES SCRIBNER'S SONS

1919

Copyright, 1918, by Charles Scribner's Sons, for the
United States of America.

Printed by the Scribner Press
New York, U. S. A.

PREFACE

It may seem quite audacious to try to include within the limits of one moderate volume a study of the workings of credit in several of the principal belligerent nations in the European War, when for a full statement of the complex credit operations in any one of them a separate volume might be little enough. There is the additional reason against it that the time and labor in collecting and digesting the material must be as great for a condensed as for an extended exposition. Nevertheless, it was believed that an examination of the most important measures in each country, told in plain, untechnical language, could be presented within a compass which would not require more time for its perusal than a busy man of affairs could afford. Such a study would, furthermore, bring to a much wider constituency an insight into the hidden workings of credit behind the issues of paper money, banking, foreign exchange, and public finance. Stripped of their technicalities, these matters can be made easy of comprehension. In addition, such a discussion under one head of the various policies of the greater nations would make possible a comparative study which would throw light on the successes and failures during the war in affairs of stupendous importance and magnitude. Thereupon, it became evident that for our own enlightenment on entering the struggle we needed not only the facts in the field of credit, but also a clear and simple presentation of the principles underlying these facts, together with a vigorous criticism of governmental policies in the light of these principles. Thus it was

hoped to make at once a constructive as well as an objective study of events never before equalled in the history of nations.

The necessity of having instruction from the experiences of other belligerents for our own guidance and admonition may justify somewhat the boldness of trying to make such a study when we are so close to the events concerned; and some indulgence must be asked for on that ground. But it will be found, nevertheless, that we have very definite knowledge regarding credit operations during the first three years of the war—a period to which our study is confined, and which in the main excludes the war operations of the United States—that allows of satisfactory analysis at this date, because it is a period long enough to enable us to watch all the essential principles of credit at play. Further years of the war will, of course, introduce more facts to be elucidated, but will not, in all probability, modify the lessons already drawn.

No attempt has been made to treat the credit operations of Russia, Austria-Hungary, or Italy, because it has been impossible to obtain sufficient reliable data for their examination. For obvious reasons emphasis has been laid on the affairs of Germany. Her amazing industrial growth in the last thirty years and its causes show that Germany brought on the war, not because she was hampered on the seas, or had no room for the growth of her population, but because her newly acquired economic strength warranted a militaristic attempt to dominate Europe and the world. The examination of her credit situation leads to the conclusion that Germany is not now solvent, and that unheard-of burdens must be carried even into the distant future. Taxing little and borrowing much, she has risked all on a single throw of the dice, on a military decision. She is even now fighting

not merely for the *status quo ante*, but for commercial gains, for expansion, if not for indemnities which will retrieve her financial losses. Indeed, her industrial classes were as much responsible for the war as her militarists; so that the weakening of her credit is likely to induce these industrial classes to work mightily for peace. The end is more to be looked for through their influence than through a revolt of the masses. The charge on the present debt of over \$30,000,000,000, together with an ordinary peace budget, takes up the total net income of the German people. With such matters, as well as with the inflation of credit, the nearly tenfold increase of paper money by the Reichsbank and loan bureaus, the depreciation of the mark by about 50 per cent, the rise of prices of over 100 per cent, the present volume is concerned.

One of the main purposes in mind has been a comparison of the ways by which the German, French, British, and American systems of credit have met the unparalleled shocks of this unprecedented war. That British credit has shown itself superior, and—in spite of the erratic plunge into government paper money—has avoided the dangerous currency expansion connected with advances to the state in France and Germany, is one of the plain inferences from a study of this war, which is rich in counsel for the management of our own credit operations.

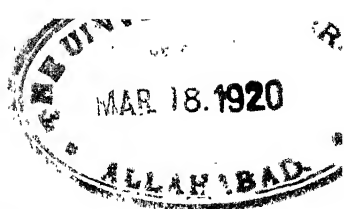
Somewhat extended treatment has been given to the problems of gold, the foreign exchanges, inflation and prices in all the countries concerned. The recrudescence of the archaic quantity theory of money in Great Britain among those discussing prices and inflation there has given cause for a pointed, but brief, criticism of that theory. Indeed, the events of this war are likely to bring about

much re-examination of the principles regulating money and prices. The recent appointment of a British Commission on the Currency and the Bank Act of 1844 is a sign of the times.

The years chosen for our study are big with matters touching money and credit. It may not be amiss to single them out, unclouded by details, for enlightenment in our present emergencies. In this way we may be better able to make an intelligent assessment of the elements in our own pressing problems.

J. LAURENCE LAUGHLIN.

JAFFREY, N. H.



CONTENTS

CHAPTER I. THE ECONOMIC SITUATION PRECEDING THE WAR

	PAGE
§ 1. The Modern Industrial Revolution	1
§ 2. General Forces at Work	2
§ 3. The Facts of Germany's Industrial Progress	12
§ 4. Causes of Germany's Development	23
§ 5. Effect on Germany's Foreign Policy	29
§ 6. Direct Causes of the War	34

CHAPTER II. WAR AND CREDIT

§ 1. Credit and Money	39
§ 2. Relation of Credit to Wealth and Capital	44
§ 3. Waste in Time of Peace	46
§ 4. Destruction in War	49
§ 5. Economic and Financial Exhaustion	52
§ 6. Limit to Borrowing	56
§ 7. Dependence of Credit on Money	60
§ 8. Why Credit is Supposed to be Limited by Money	65

CHAPTER III. ENGLISH CREDIT OPERATIONS

§ 1. Organization of Credit in England	70
§ 2. Situation at the Outbreak of War	76
§ 3. The Sudden Crisis in English Credit	78
§ 4. Remedies Adopted	85
§ 5. The Gold Question	101
§ 6. Adjustment to War Conditions	105

	PAGE
§ 7. Inflation and Prices	114
§ 8. The Foreign Exchanges	121
§ 9. Government Borrowing	133

CHAPTER IV. FRENCH MONEY AND CREDIT

§ 1. French System of Credit	143
§ 2. Conditions When War Came	151
§ 3. Early Effects of the War	156
§ 4. Services of the Bank of France	165
§ 5. Fiscal and Monetary Functions Confused	176
§ 6. Depreciation and Prices	179
§ 7. Foreign Exchange	183
§ 8. Fiscal Methods	189

CHAPTER V. GERMAN CREDIT OPERATIONS

§ 1. Preparations for War	197
§ 2. Organization of Credit in Germany	205
§ 3. Supplementary War Institutions of Credit	213
§ 4. First Effects of War	219
§ 5. Work of the Reichsbank	226
§ 6. Gold	233
§ 7. Solvency of German Credit	238
§ 8. Dislocation of Trade	243
§ 9. Depreciation and Prices	245
§ 10. Foreign Exchange	249
§ 11. Methods of Financing the War	257

CHAPTER VI. WAR AND CREDIT IN NEUTRAL UNITED STATES

§ 1. Credit Conditions before the War	278
§ 2. First Shocks to Credit in 1914	283

CONTENTS

xi

	PAGE
§ 3. Means of Relief	297
§ 4. Upheaval in Foreign Trade	306
§ 5. Movement of Securities	319
§ 6. Foreign Exchange and Gold	322
§ 7. Inflation and Prices	346
§ 8. Loans to Other Countries	353

APPENDICES

APPENDIX I. GREAT BRITAIN

A. Currency and Bank Notes Act, August 6, 1914	363
B. Treasury directions under the same	364
C. Proclamation postponing payment of bills of exchange	366
D. Treasury paper of August 13, 1914, regarding discount by Bank of England	366
E. Formal arrangement under D	367

APPENDIX II. FRANCE

A. Suspension of specie payments by the Banque de France. Law of August 5, 1914	369
B. Moratorium, August 9, 1914	369
C. Transactions in Securities, September 27, 1914	371

APPENDIX III. GERMANY

A. Bank Act of March 14, 1875	372
B. Altering Bank Act, August 4, 1914	382
C. Supplement to regulations of the imperial debt	383
D. Modifying the Mint Act	383
E. Darlehnskassen Act	384

APPENDIX IV. UNITED STATES

	PAGE
A. Amendment of Federal Reserve Act, August 4, 1914 . . .	388
B. Registry of foreign-built ships	389
C. Act April 24, 1917	390
D. Loans to Allies	392
Index	401

CHARTS

	PAGE
I. Relative Progress of Leading Countries, 1880-1912 . .	14
II. Bank of England, 1914-1917	90
III. English Foreign Trade, 1914-1917	108
IV. Bank of France, 1914-1917	167
V. Reichsbank, 1914-1917	229
VI. Gold Imports and Exports of the United States, 1913- 1917	283
VII. Merchandise Imports and Exports of the United States, 1911-1917	290
VIII. New York Clearing-House Banks, 1914	295
IX. Course of Dollar Exchange on Neutral Places, 1914-1917	342

CREDIT OF THE NATIONS

CHAPTER I

THE ECONOMIC SITUATION PRECEDING THE WAR

Unparalleled industrial revolution since 1880—New era of power—Progress in transportation—Opening of new resources—Gains in mechanics and chemistry—New business organization—Upheaval in education—Evolution of credit—German growth part of world-wide movement—Relative progress of leading nations—Characteristics of German improvement, 1880-1910—Causes underlying it—Effect of industrial success on German foreign policy—Direct causes of the war.

§ 1. Even though the immediate causes of the European War may have been dynastic ambition, exaggerated nationalism, and lust for power, the ultimate causes are undoubtedly to be found in economic conditions. However active these immediate influences may have been, they were limited, or guided, sometimes unconsciously, by the underlying economic forces. In the period since 1880 commercial rivalries have not been so much struggles for actual existence as they have been races against others for the foremost place in an unparalleled industrial development going on in many countries. It was the period of a world-wide industrial renaissance, without doubt the most striking in the whole course of human history. Nothing in the past has ever equalled it. There had been in earlier years special achievements like the steam-engine, or the railway, or the steamship, or the telegraph, but in this period all began to work together, fusing their individual gains into one expansive ever-rising stream of conquests over nature which has made unequalled the recent amazing industrial revolution in which we are now living.

The industrial renaissance.

All that had gone before seemed now to burst into a universal fruitage. Moreover, scarcely any article of common use to-day has been left untouched by progress either in the methods of its manufacture or in its cost of production. So wide-reaching and so varied has been this evolution of the world's productive forces that it can here be only sketched in outline; for, however necessary an understanding of them may be to the scenario of the European War, an adequate and complete statement in this place would make the portico of our edifice far larger than the edifice itself.

§ 2. In the conquest of man over nature nothing has been more striking during this period of about thirty years (1880-1910) than the rise of a new era of power. The manufacture of power has created a new epoch. "No changes have ever equalled those through which the world is now passing."¹

The
manufacture
of power.

Wherever and when needed, man can now manufacture practically unlimited power which relieves him of human labor. No longer are we confined to the bank of a river or to a waterfall as a site for a factory; nor are we dependent on the power of horses or animals, nor on the uncertain power of the wind. Although the steam-engine was developed in 1769, the manufacture of power by steam has come to full fruition only in the present epoch. Electricity has been used not only as a new source of power, but as a conveyor of power to distant plants. The introduction of the gas-engine into the service of every-day tasks in the shop, on the farm, and in the automobile, the harnessing of waterfalls to produce energy and power are practical illustrations of what has

¹ *The New Epoch*, by George S. Morison (1903), to which the author is much indebted.

recently come to aid in the production of our satisfactions. Now enormous amounts of power can be concentrated where power could not before be had; this inanimate power relieves animal and human labor; while the mind of man is now released to designing methods and tools for applying power. Man has been thereby promoted from physical to mental and directing tasks. We are in this period indeed living in the midst of changes such as were never equalled in the history of the world.

In this same period undoubtedly the greatest application of power, working for a fuller production and so for an enlarged social consumption and development; for an opening of new resources, giving room not only for a larger population but for a higher ^{Cheapered cost of transportation.} standard of living; for the cheaper distribution of goods from the producer to the consumer; for the easier movement of coal and ore, and other materials, such as cotton and metals, to the centres of industry; for the placing of the products of one climate at the disposal of the inhabitants of another,—has appeared in the remarkable progress in the means of transportation by land and sea. Not only has this expanding force steadily modified the material comfort of increasing millions of men, but it has introduced marked changes into political and international relations. Where in the beginning of this period life was narrow, provincial, and remote, now a cosmopolitan newspaper is delivered overnight to the farmer's door. Great Britain, or New England, can devote itself entirely to machine-made industries, without giving any serious attention to its own production of food, because the fertile districts of Dacotah, Argentine, Australia, and the Danube are brought near by quick and cheap transportation. Thereby, also, the interdependence of trade has made nations much more

dependent on each other—a fact that makes modern war, which cuts off exports and imports on a colossal scale, more disastrous than wars of earlier decades.

While there had been, earlier in the nineteenth century, the application of the steam-engine to railway transportation, as well as the discovery of anthracite coal, leading to the development of the iron industry, the really important phase of railway building and railway extension began in the seventies and culminated through this period we have in mind. From 1880 to 1914 the total mileage of railroads in operation in the United States expanded by 282 per cent (from 93,267 to 263,547); while the charge for carrying a bushel of wheat from Chicago to New York by rail fell from 19.9 cents in 1880 to 9.6 cents in 1910. And what was true of the United States was, in the main, true of other countries. From 1880 to 1910 the railways of the world increased 283 per cent in miles of lines, while the miles of telegraphs grew by 300 per cent.¹ In particular countries the rate of gain varied, Russia and Italy

Country	Miles of line	Per cent of increase to 1910	Tons carried	Per cent of increase
France:				
1880.....	14,736		89,037,635	
1910.....	25,072	70	190,965,819	114
Germany:				
1880.....	21,052		176,799,144	
1910.....	38,092	81	597,140,439	239
Italy:				
1880.....	5,340		10,283,530	
1910.....	10,538	97	42,376,809	310
Russia:				
1880.....	14,824		.....
1890.....	18,164		75,480,187	
1910.....	41,818	182	262,494,980	250
United Kingdom:				
1880.....	17,933		263,542,304	
1910.....	23,389	30	576,160,263	119

growing in mileage and tonnage faster than Germany; while Germany surpassed the United Kingdom, in which an earlier start allowed less relative gain.

Moreover, progress on ocean, went on hand in hand with progress on land, transportation. In this period the reliance on the obsolete form of wind propulsion was largely given up, as shown in the decline of the world's sail tonnage by 1910 to one-third of its amount in 1880; while its steam tonnage had multiplied fourfold, coincident with a gain of commerce throughout the world of about 230 per cent. This phenomenal extension of sea-borne traffic was made possible by the development of the modern steamship. "The power generated in a modern steamship in a single voyage across the Atlantic is more than enough to raise from the Nile and set in place every stone of the great Egyptian pyramid."¹ The introduction of the screw propeller, necessarily followed by iron and steel ships, the development of the steam-engine for large vessels, the surprising increase in length and beam to allow manyfold the carrying capacity, the devices for quick loading and unloading, and the establishment of new lines of steamers and new routes to hitherto inaccessible parts of the world account for the increase of the world's commerce and a fall in ocean freights corresponding to that on railways. For instance, the cost of carrying a bushel of wheat from New York to Liverpool fell from 5½d. in 1880 to 1½d. in 1910, or to about one-fourth. The improvement of the marine engine so that the coal consumption was reduced to less than a pound and a half per indicated horse-power, made possible the speed of the Atlantic liner and the extremely cheap carriage of the tramp freight steamer. Thus were the gains in transportation,

Fall in ocean
freights.

¹ Morison, *ibid.*, p. 5.

permitting a vast increase in the world's population, accompanied by a reduction in the cost of subsistence. Such were the triumphs of peace.

This period is further memorable for the opening of new resources throughout the world, made possible by the extension of cheap transportation, and thereby hold-

ing back on a scale never before known in economic history the tendency to diminishing returns. In this country there was witnessed

Industrial colonization. the occupation and cultivation of the wide territory west of Minnesota, Iowa, Missouri, and Arkansas, which added vast stores of wheat, corn, cotton, cattle, coal, and metals to our use, and gave an undreamed-of stimulus to our home markets for all kinds of manufactures. But the United States was enjoying only its share of a world-wide movement. The same forces were at work wherever on the globe civilization and enterprise were carrying the results of invention and industrial progress. It might truthfully be said that this period was one characterized by industrial colonization, an inevitable consequence of improved transportation. It saw the opening of new ports and the development of great territories hitherto inaccessible in Africa, Australasia, China, Japan, South America, and British North America. With the multiplication many times over of the products for general consumption, there was besides an increase in still greater proportion of the supply of gold. The movement of more goods led to greater activity in the mechanism and organization of credit and banking, not in one country, but in all countries.

As we proceed there are unrolled before us additional conquests of intelligence and science over nature, particularly in the field of mechanics and chemistry. It would be folly to attempt a catalogue even of the more char-

acteristic inventions which have abridged costs in the work of the world's industries. Improved locomotives have brought greater speed and hauled longer trains; standardization and interchangeability of parts made cheaper and better watches, firearms, and agricultural implements; special tools and machinery changed rods into screws and metal into pages of type; new devices have made possible difficult irrigation schemes and even the Panama Canal. Everywhere, notably in the electrical field, have new inventions revolutionized the processes of industry. Steel instead of iron has become the order of the day. "Only twenty years ago," says Morison, "nothing typified the strain of human labor more than the row of furnaces, in which the puddlers, by muscular effort and in glaring heat, slowly drew together the particles of soft metal into the spongy puddle-ball, from which wrought iron was forged and rolled. To-day the Bessemer converter and the open-hearth furnace have spoken the doom of wrought iron, which is disappearing before the less costly steel, and there is nothing more striking about a great steel plant than the absence of men."

The economics of chemistry disclose a wide ramification in the applications of principles to practical industry. Vegetable dyes, for instance, have given way to newer commercial products, which revolutionized the whole dye industry; and in this progress Germany had taken the lead. In the recovery of by-products of coal and oil hundreds of new commodities have appeared. In the steel industry the Bessemer process (1864) cheapened the making of steel; the removal of phosphorus from the ores by Sidney Gilchrist Thomas allowed poorer ones to be used; and the open-hearth Siemens furnace followed. All these are characteristic of the modern industrial revolution. Nor are

Science aids
industry.

they confined to any one country, since scientific gains become universal property.

Moreover, while in previous decades events had been preparing for later triumphs, the culmination of many contributing causes in producing a wholly unprecedented era

of industrial change is the mark of this period.

Changed business organization. These changes in economic methods, moreover, led inevitably to a new development in

business organization. The corporation early arose to meet the need of a large capital supplied by many small contributors, thus distributing the risks of enterprise; but the significant use of corporate forms in large combinations of industrial operations did not come until late in this period. When several hundred thousand dollars are paid for a single steam-hammer, or a single train of tools in a modern plant, the whole establishment requires vast capital, with the result that production on a large scale, by the use of inanimate power, lessens the amount of human labor relative to the power developed; but it enables the laborers to receive the highest wages at the same time that their goods undersell in Asiatic markets those of laborers (unaided by these mechanical marvels) who receive only one-tenth the wages. For this obvious reason the period may be described, also, as an era of corporations. In our country underlying economic conditions have brought us the "trust" problem; while in Germany the *Kartel* has arisen from the same evolution. In every country the inevitable presence of large production has created its special problem, no matter how differently it has been met.

Not less significant in its influence, and because it has been an inevitable consequence of the new conditions of industry and science, has been the upheaval in the conservative ways of education. The new forces of the

world call for men trained in new ways. The education for the old so-called "learned professions" is not adapted for training the men who must invent, design, and manage the mechanism called forth by the use of newly developed forces. A premium of material success is now set on an entirely new type of industrial leader and *entrepreneur*. An accurate and disciplined mind, able to direct men, taught how to think, how to investigate and construct with mathematical exactness and with precise knowledge of the laws of matter, or of the chemical composition of substances—the need for men of such quality demanded a new type of education. In addition, nine-tenths of the public questions and of the problems of the *entrepreneur* became economic; and education had to provide place not only for science and its applications in new ways, but also for economic and public administration. The man trained only in the law was no longer the best legislator.

The new
training.

Apart from the education of men for the highest posts of industry, the mechanical and vocational training which made a skilled artisan became recognized in the new era as a source of superiority. Stupidity became a crime; efficiency a necessary virtue. The country which surpassed others in recognizing the needs of the new era and best trained its artisan class gained most in the keen industrial competition which had arisen in this period. As we shall soon see, Germany was one of the quickest to see the value of thorough and exact training for its working classes. In this respect Great Britain and the United States have been slow to follow.

As a consequence of the multiplication of products suited to men's use, came the new problems of their quick and easy exchange in all markets. Apart from the price-making of goods in terms of a standard money, the

they confined to any one country, since scientific gains become universal property.

Moreover, while in previous decades events had been preparing for later triumphs, the culmination of many contributing causes in producing a wholly unprecedented era

Changed
business
organization.

of industrial change is the mark of this period. These changes in economic methods, moreover, led inevitably to a new development in business organization. The corporation early arose to meet the need of a large capital supplied by many small contributors, thus distributing the risks of enterprise; but the significant use of corporate forms in large combinations of industrial operations did not come until late in this period. When several hundred thousand dollars are paid for a single steam-hammer, or a single train of tools in a modern plant, the whole establishment requires vast capital, with the result that production on a large scale, by the use of inanimate power, lessens the amount of human labor relative to the power developed; but it enables the laborers to receive the highest wages at the same time that their goods undersell in Asiatic markets those of laborers (unaided by these mechanical marvels) who receive only one-tenth the wages. For this obvious reason the period may be described, also, as an era of corporations. In our country underlying economic conditions have brought us the "trust" problem; while in Germany the *Kartel* has arisen from the same evolution. In every country the inevitable presence of large production has created its special problem, no matter how differently it has been met.

Not less significant in its influence, and because it has been an inevitable consequence of the new conditions of industry and science, has been the upheaval in the conservative ways of education. The new forces of the

world call for men trained in new ways. The education for the old so-called "learned professions" is not adapted for training the men who must invent, design, and manage the mechanism called forth by the use of newly developed forces. A

The new
training.

A premium of material success is now set on an entirely new type of industrial leader and *entrepreneur*. An accurate and disciplined mind, able to direct men, taught how to think, how to investigate and construct with mathematical exactness and with precise knowledge of the laws of matter, or of the chemical composition of substances—the need for men of such quality demanded a new type of education. In addition, nine-tenths of the public questions and of the problems of the *entrepreneur* became economic; and education had to provide place not only for science and its applications in new ways, but also for economic and public administration. The man trained only in the law was no longer the best legislator.

Apart from the education of men for the highest posts of industry, the mechanical and vocational training which made a skilled artisan became recognized in the new era as a source of superiority. Stupidity became a crime; efficiency a necessary virtue. The country which surpassed others in recognizing the needs of the new era and best trained its artisan class gained most in the keen industrial competition which had arisen in this period. As we shall soon see, Germany was one of the quickest to see the value of thorough and exact training for its working classes. In this respect Great Britain and the United States have been slow to follow.

As a consequence of the multiplication of products suited to men's use, came the new problems of their quick and easy exchange in all markets. Apart from the price-making of goods in terms of a standard money, the

devices for exchanging them were not confined to forms of money. In the evolution of various media of exchange, induced by the desire to avoid the risk of using the valuable standard metals, like silver and gold, came in addition to the early credit devices such as bank-notes and bills of exchange, the most phenomenal of all, the use of bank-checks drawn on deposits, or the deposit-currency. To the man of to-day in Anglo-Saxon countries the general use of checks for all but a fraction of our daily transactions is so familiar as to attract no attention; and yet its development, through clearing-houses, is of recent date. The New York Clearing-House was established only in 1853; and in many other large cities in later decades.¹ Banking and deposit-currency, however, are but practical applications of the general principles of credit. The significant movement, of which the rise of the deposit-currency is but a part, is the rise and extension of credit. Nothing else is more characteristic of this period.

The extension of credit—that is, the transfer of goods under obligation to return an equivalent in the future—quite apart from the forms (such as bills, checks, notes) arising from these transfers, is a special characteristic of this period. Early in the nineteenth century the purchasing power of a business man was largely confined to the amount of money he could command; but the rise of credit increased the available purchasing power by the enormous mass of

Evolution of
media of
exchange.

Rise of
credit.

¹ The London Clearing-House, although dating back to 1773, kept no records prior to 1840, and became active only after the creation of the one in New York. Others were established in Boston (1856), Philadelphia (1858), Chicago (1865), St. Louis (1868), Osaka, Japan (1879), Tokio (1887). On the Continent the forms of credit did not warrant much development of checks and clearing-houses, although they have shown some growth in Germany and France. In the United States alone there are 170.

staple goods bought and sold, which became the best possible basis of bank assets. Bankable goods became synonymous with all articles having a liquid, salable quality. In the time of Ricardo credit had little place in the economic world. To-day it is of first importance, not only in all private transactions, but in the fiscal operations of all governments, while its influence upon prices and the principles of money has been much misunderstood. Ricardo expressed a belief that prices of goods depended on the quantity of money in circulation; but to-day an undreamed-of volume of goods are exchanged by forms of credit practically without the intervention of any money. For instance, in the United States alone goods to the amount of \$173,000,000,000 were exchanged by the use of checks in one year (1913).

Moreover, the growth of capital directed to banking for the purpose of providing credit to those engaged in producing and distributing goods has gone on *pari passu* with the demands of an enormously increased output of goods. But the increase of banking power, which is synonymous with the operations of credit, is not to be measured by the amount of banking capital (and surplus) but by the credit work performed by that capital, that is, by the growth (in Anglo-Saxon lands) of deposits; since loans result directly in deposits, and the relationship between loans and deposits is close. In the last thirty years the deposit item of our national banks, which may be taken as fairly representative of banking and credit development, increased from 1880 to 1910 by 534 per cent; or if all banks, except savings-banks, be taken, the gain has been 754 per cent.¹

In international trade the bill of exchange serves as a medium of exchange, and balances only are paid in coin

¹ *U. S. Statistical Abstract*, 1914, p. 632.

or bullion. The discovery that goods (after being priced in some standard) could be safely bought and sold, by credit devices, amounts being offset against each other in opposing currents of domestic and foreign trade, without passing money from hand to hand, has produced a mechanism of flexibility and power, rising to almost incredible achievements, which was unknown in earlier decades. As we proceed in our study of the European War we shall begin to realize the wonder-working ways of credit.

§ 3. Into a world pulsing with the life of these new forces, the Bismarckian German Empire issued from its Prussian chrysalis after the Franco-Prussian War of 1870-1871. It took its part in a world-wide movement. It is not unnatural that an exaggerated and egoistic nationalism may have ascribed the extent and speed of its progress largely to its own internal virtues, and have given little heed to the world-wide surge of new forces on which it, as well as other countries, was being carried to unexpected triumphs.¹ Certain it is, however, that its characteristic virtues and discipline helped to propel its craft at a greater speed on the swift-moving current. The exact nature and trend of that progress throughout this remarkable period just before the European War is necessary to our understanding of the various problems before us.

Before the empire the German race was scattered in relatively small states from the North Sea to the Danube.

¹ "The German people . . . have broadened all the conditions of their life from a contracted narrowness to an undreamt-of expansion; and, all things considered, they have achieved an advancement such as, compressed within so brief a time, the history of nations can hardly parallel," says Karl Helfferich, in *Germany's Economic Progress and National Wealth, 1888-1913* (1913), p. 6.

It was a community of simple ways, chiefly rural, and its manufactures were largely hand-made. In Prussia, in 1804, 73 per cent of the population were engaged in rural occupations, such as agriculture, and only 27 per cent were classed as urban; while more than one-half of this 27 per cent were connected with agriculture. At that time Prussia had but seventeen cities with inhabitants numbering over 10,000.¹ A people with little adaptability, the Germans retained these rural and slow-changing characteristics well into the present period. The significant mark of her industry was the prevalence of handicraft; machinery, not only in agriculture but in her limited sphere of manufactures, was undeveloped. They exported foodstuffs and raw materials, and imported manufactured products. Germany was an inland country, with little or no transportation by canals or railways between the various disunited German states. Her development of credit and banking was backward.

Early
Germany
given to
handicraft.

Long before the German Empire arose England had developed and powerfully extended the many uses of steam and machinery. Long before Germany existed as a nation and first of all the nations, England had passed from an age of handicraft to an age of machinery. The new era had its birth on British soil. To this fact is to be attributed the prodigious growth of British manufactures, industry, and commerce in the nineteenth century. Before other peoples she had begun to supplement her labor with the manifold productiveness of new mechanical forces. If other countries later also turned from handicraft to mechanical methods, in imitation of and stimulated by British example, they were sure to make startling progress in their trans-

Great
Britain
first in the
mechanical
stage.

¹ Cf. Earl D. Howard, *Recent Industrial Progress of Germany* (1907).

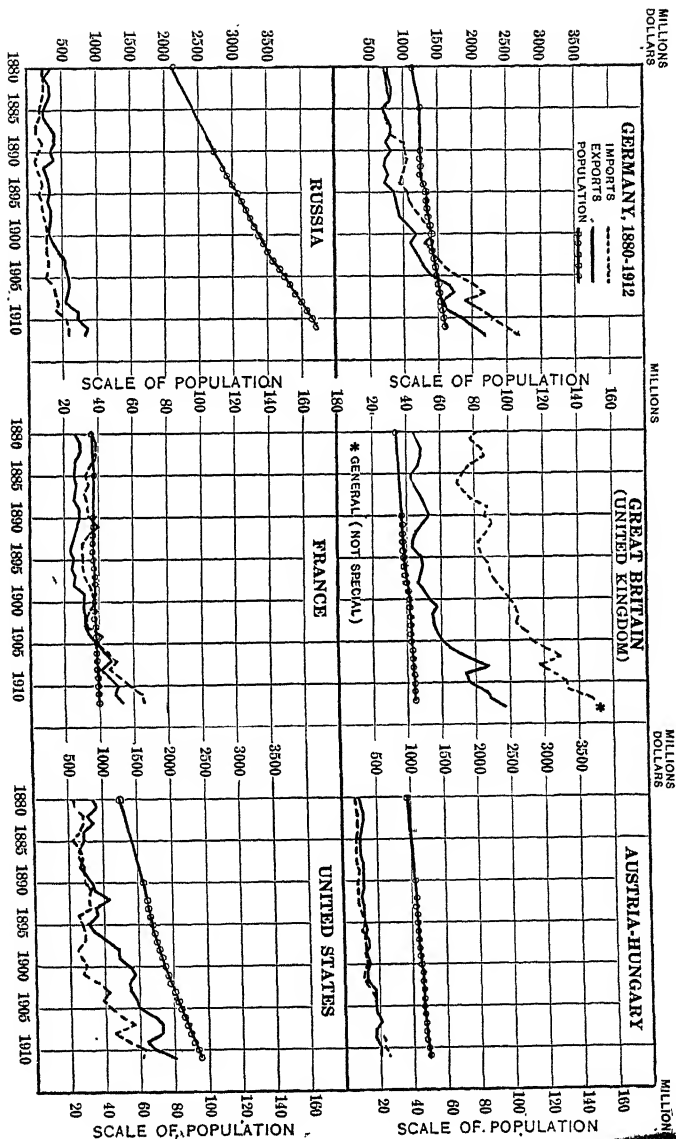
itional period, gaining relatively on Great Britain, even though not outstripping her. British progress in later decades, while continuous, could not possibly keep up the comparative rate of her own early transition to the mechanical stage. As contrasted with that of England, the story of German industrial growth is that of an energetic, industrious, thrifty people, able to take up mechanical devices ready to their hand, already perfected in other countries, and thus able to join in the amazing conquests of this era of new forces.

Germany
followed
England.

The rate of her early progress was sure to be spectacular, because she started from a position so far in the rear. She has not inaugurated a new era; she entered into the new industrial movement which had started before her birth. But by to-day she has fully changed from the former handicraft, agricultural people to a manufacturing, exporting, and commercial nation. For the present we are concerned not with her political and militaristic policy, but with the facts of her industrial development.

In Chart I we have a ready means of measuring the economic progress of Germany in this period, not only absolutely, but in comparison with Great Britain, Russia, France, Austria-Hungary, and the United States. The growth of population alone is, of course, no measure of industrial gain; but the contrast of numbers with what numbers can do is striking and significant. The increase of population is, as was to be expected, greatest in Russia, followed by that of the United States, both having had extensive areas of agricultural, forest, and mineral resources to be exploited, serving as a stimulus to numbers. In Great Britain, Austria-Hungary, and France, population has remained nearly stationary, while that of Germany has gained since 1880 about 57 per cent.

CHART I



But, taking up the imports and exports of goods as an indication of industrial and commercial progress, the contrasts are illuminating. With numbers as great as those of Great Britain, Austria-Hungary has made little commercial gain. Russia with the greatest growth in numbers has not used her units of human labor to commercial advantage and her foreign trade has been sluggish; even France has gained more than either Austria-Hungary or Russia. In comparing Germany with Great Britain, we find both have greatly extended their foreign commerce, with the latter still in the lead; but, with a smaller population than Germany, Great Britain's superior control of machine-made processes has so increased the power of her labor in this era of new forces that her commerce¹ is still absolutely larger than Germany's. The case of the United States is suggestive, if only for the reason that a rapid increase in numbers goes hand in hand with a marked gain in foreign trade; that is, the agricultural régime is no longer the main source of commerce. Although our excess of exports is due largely to grain, cotton, and extractive products, yet in these industries labor is aided by machine processes and by the new forces probably to a greater extent than in any other country.

Relative
progress of
leading
countries.

Obviously, even though the movement of exports and imports is indicative of internal productivity, foreign commerce is not the only measure of industrial growth.

¹ The advantage to Great Britain in imports is not so great as the line in the chart would indicate, because it is not possible to obtain figures throughout the period for "special" imports (for home consumption). The British line of imports gives the "general" imports, while for all the other lines the figures are "special." For instance, in 1910, British "special" imports are \$2,872,000,000 against \$3,391,000,000 of "general" imports.

Of course there could be no foreign trade without relative low costs and special efficiency of production at home. Germany's internal development, therefore, is of interest, not only because of its fundamental relation to her foreign trade, but because the specific industries in which she has most excelled throw light upon the causes of her remarkable progress.

Immediately after the Franco-Prussian War there was a "boom" period, which had little foundation beyond the elation of victory and the receipt of the French indemnity.

It was followed by a collapse which lasted for some fifteen years, or until about 1890. The recovery due to general causes happened to coincide roughly with the beginning (1888) of the reign of the present Kaiser, and allowed good courtiers to ascribe the change to his personal leadership.

The internal industrial development of Germany has been, of course, much more marked even than her foreign commerce. While remaining an agricultural country, nearly able to supply her own consumption in normal years, the marked characteristic of her industrial progress has been a relative decline in agriculture and a relative rise in manufactures. Nevertheless, it must be kept in mind that the ruling classes, such as the conservative landowners of the east, have provided a highly protective tariff for agricultural products, the advantages of which to this particular interest have been estimated at about \$50,000,000 a year.¹ Moreover, bureaucratic control and scientific aids to soil and to methods of cultivation have made the productivity of her land greater per acre than ever before; although the area available for agriculture and forestry is practically incapable of

Germany
after 1870.

German
gains in both
agriculture
and
manufactures.

¹ Cf. E. Crammond, *Journal of the Royal Statistical Society*, July, 1914.

increase.¹ In spite of the gains due to greater intensity of cultivation, and the added efficiency of labor through the increased use of agricultural machinery, the manufacturing interests have gained far more. While in 1882 the persons engaged in agriculture and forestry made up 42 per cent of the total population, the percentage in 1907 was only 28.5 (although the absolute number was 17,681,200). As with us, the tendency to move from the land to the towns was an inevitable consequence of the urban demand for factory labor in connection with the new mechanical era. In 1885 only 18.4 per cent of the inhabitants lived in towns of over 20,000, but in 1910 the proportion was 34.5 per cent. As in the United States, and for the same reason, the increasing urban population brought about a rising demand for foodstuffs. Instead of exporting foodstuffs and raw materials and importing manufactures, as formerly, Germany now felt the need of expanding her mechanical industries and stimulating her exports of manufactured goods in order to pay for the steadily increasing imports of food, which had risen from \$241,375,000 in 1887 to \$800,150,000 in 1912. As to food, in spite of her intensive cultivation, she was no longer self-sufficing. Great Britain had long before accepted the inevitable result of the manufacturing régime, and had compara-

Germany
exports
manufactures.

¹ Karl Helfferich, *op. cit.*, makes the following comparison, pp. 53-54:

	Average yield per hectare (2.47 acres) in tons	
	1883-1887	1908-1912
Rye.....	1.00	1.78
Wheat.....	1.34	2.07
Summer barley.....	1.28	2.01
Potatoes.....	8.74	13.37
Oats.....	1.13	1.90
Hay.....	2.85	4.21

tively neglected agricultural pursuits, so that in 1912 she produced but one-half of her consumption of food.¹ Hence a necessary reliance on her navy in case of war.

Although Germany mines salts, lead, zinc, and copper, the basis of her industrial development, as well as that of Great Britain and of the United States, lay in coal and iron. In the production of coal Ger-

many now holds third place and yields about one-fifth of the total coal production of the world.² The hard coal to be found in Rhenish Westphalia, upper and lower Silesia, and at Saarbrücken, is practically inexhaustible. Taking mining as a whole, in which perhaps one-fifth of her population is engaged, there has been an increase in the value of her annual products from \$175,000,000 to over \$400,000,000 in twenty-five years.

¹ The aggregate yields of typical crops in other countries than Great Britain are as follows (in millions of tons):

Harvest year	Countries	Wheat and rye	Potatoes
1912	Russia.....	42.6	36.9
1912	United States.....	20.8	11.4
1912	Germany.....	15.9	50.2
1912	Austria-Hungary.....	11.2	18.5
1911	France.....	10.4	11.5
1911-1912	British India.....	8.4	....
1912-1913	Argentina.....	6.4	....
1912	Canada.....	5.4	2.2

K. Helfferich, *ibid.*, p. 55.

² The relative growth of the leading producers of coal may be seen as follows (in millions of tons):

Countries	1886	1911	Percentage of increase
United States.....	103.1	450.2	336.6
Great Britain.....	160.0	276.2	72.6
Germany.....	73.7	234.5	218.1
Austria-Hungary.....	20.8	49.2	136.5
France.....	19.9	39.3	97.5
Belgium.....	17.3	23.1	33.5

German iron ores contain considerable phosphorus, and little use could be made of them until the Gilchrist Thomas process was applied, in 1868; but from 1887 to 1911 the production of iron ore increased three-fold. Moreover, foreign ores were also im-
ported, and in the same period the production of pig-iron was quadrupled, so that now Germany ranks next to the United States and above Great Britain (since 1903) in this industry. She holds the same rank in the production of steel; her percentage of increase since 1886 being even 1,335 against 910.3 per cent of gain by the United States.

Iron and
steel.

For the manufacture and exportation of machinery, and for the extraordinary needs of the electrical industry, there arose a great increase in the demand for iron and steel for steel rails, bridges, building materials, mining machinery, and railway equipment. Locomotives were sold to Russia; while it is estimated that 91 per cent of the electrical railways in Europe were built by Germans. From 1882 to 1907 the persons employed in producing machinery increased by 229.1 per cent, and the steam power by 557.7 per cent. It is to be noted, however, that in this field Germans, in the main, were not inventors, but adapters of the improvements originated by others. England still held a superiority in textile machinery, and the United States in agricultural implements.

Machinery.

In the applications of science to the chemical and beet-sugar industries characteristic German qualities came into play. Bayer in 1897 discovered the process of making artificial indigo, or alizarine, from a coal-tar product; and German chemists superseded organic dyes with dyestuffs from coal-tar, the by-products of gas and coke, which had formerly gone to

Dyes.

waste. When the war broke out Germany was found to have furnished the main supplies of these dyes. For this industry benzol had been imported from England, Belgium, and Austria-Hungary. Inasmuch as these processes were closely related to the production of explosives there was a reason for the invasion of Belgium in obtaining control of its coal and gas, apart from its furnishing an easier road to Paris than through the French frontier.

The chemical triumphs in developing the processes of extracting sugar from beets are primarily German, and she leads the world in this industry. In 1911 Germany

Sugar. produced 2,701,000 tons of beet-sugar, far surpassing Russia, Austria-Hungary, and France.

In this period the area planted to sugar beets was nearly quintupled, the total quantity of sugar increasing over sevenfold, and the weight of beets to make one kilogram of sugar being reduced from 11.62 (kilo.) to 6.08.

In the textile industries the characteristic lessons of this period appear in striking form. Long ago, before the Thirty Years' War, the Germans had produced and

Textiles. exported woollen and linen goods, but were dependent mainly on agricultural occupations, such as the growing of flax and the raising of sheep. Her reliance, as we have seen, was on handicraft; weaving was done at home. The invention of the steam-engine, the spinning-jenny, and the power-loom in England in the eighteenth century so lowered the cost of producing textiles that Germans could not compete with the English, the efficiency of whose labor had been enormously multiplied by the use of new power. In Germany low wages and what was known as domestic production could not hold its own against the factory system. Yet she was late in changing from the household to factory methods. It was 1860, or thirty years later than in England, before

the automatic cotton-spindle was introduced into Saxony, where cotton goods had been manufactured by machinery since 1798. From 1882 to 1907 the persons employed in textiles (now over 1,000,000) have increased by only 20.3 per cent, and the steam-power by 71.7. Nevertheless there has been a distinct growth in the exports of these goods in twenty-five years.¹ As contrasted with 55,600,000 spindles in Great Britain in 1909, Germany had only 10,100,000; and while Germany exported \$121,400,000 of cotton goods in 1912, Great Britain exported \$611,100,000. Similarly British exports of woollen goods in 1912 were \$188,800,000, but German were only \$84,400,000.

Taking German manufacturing industries as a whole, Helfferich estimates that in the past twenty-five years their producing capacity has increased threefold. In this fact we find the *raison d'être* for the remarkable gain in German commerce and shipping. For permanent international trade, goods in the main must be exported to pay for imports. As Germany now grows little wool, and no cotton, the important items in her foreign trade are wool, woollens, cotton, cotton goods, as well as iron and steel and machinery. She has imported chiefly from Russia, Great Britain, Austria-Hungary, France, India, Argentine, and the United States (taking our cotton, copper, wheat, petroleum, corn, lard, turpentine, oil-cake, etc.); and exported chiefly to Russia, Great Britain, Austria-Hungary, France, Belgium, Netherlands, Switzerland, and the United States (selling

Germany
imports raw
materials.

¹ (In millions)

Cottons	from \$16.8 to \$105.4
Woollens	from 44.4 to 63.5
Silks	from 4.0 to 47.7
Woollen yarns	from 8.5 to 21.0
Cotton yarns	from 4.4 to 16.0

to us cotton goods, hosiery, silks, porcelains, dyes, toys, gloves, etc.).¹ From 1887 to 1912 her imports gained by 243.8 per cent, and her exports by 185.4 per cent. As against a total gain in foreign trade for Germany of 214.7 per cent, that of Great Britain was 113, of the United States 173.3, and of France 98.1.

As a consequence, it became possible to expand the German mercantile marine two and a half times since 1888 to about 4,400,000 tons at the end of 1912. In 1911 Germany and Great Britain together did 39 per cent of the world's international trade (the former 12.5 and the latter 26.9); and between them they owned 53 per cent of the world's shipping.² In 1880, 39.1 per cent of German sea-borne trade was carried in German bottoms, and in 1911 50.4 per cent. In the same years British figures dropped from 72.2 per cent to 59 per cent. It is significant to note, also, that in the tonnage passing through the Suez Canal, which was under English control, in 1892 that owned by Great Britain was 74.5 per cent, and that by Germany was 7.4 per cent; but in 1912 the percentages were respectively 62.9 and 15.1. That is, under the freedom of the seas, German had gained at the expense of English tonnage.

¹ In 1913, of a total for Germany of \$2,675,000,000 in imports, food products, animals, industrial raw materials, and semi-manufactured goods amounted to \$2,275,000,000, and finished goods to \$400,000,000. While of \$2,225,000,000 exports, finished goods amounted to \$1,450,000,000. Helfferich, *op. cit.*, p. 38.

² Mercantile marine of leading countries (in millions of tons):

	1885	1911
Great Britain.....	7.4	11.6
United States.....	4.2	4.6
Germany.....	1.2	3.0
Norway.....	1.7	1.5
France.....	1.3	1.4

§ 4. Having before us the unmistakable facts as to the very remarkable economic progress of Germany in the period immediately preceding the European War, we are the better able, by virtue of the direction and characteristics of that progress, to reach a conclusion as to the causes underlying it.

**Causes of
Germany's
progress.**

Indeed, it does not seem possible to go far wrong. As in most studies of this sort, the resultant seems to be the outcome of a combination of more than one set of forces.

The ruling influence in this case is undoubtedly the general industrial revolution which has caused an upheaval in every modern nation. The transition from handicraft to machinery, the discovery and application of new mechanical forces, would alone account for much of what has happened. It is the conspicuous merit of Helfferich's analysis of this period that he has emphasized the influence of the new technic. In giving the increase of steam-power in twenty-five years as fourfold, he makes this statement:¹

The effective capacity of one mechanical horse-power can be placed at about the equivalent of the physical labor capacity of ten men. Upon this basis the actual work done by German steam-engines in the year 1907 was equivalent to the work done by 52,000,000 men; and the increase of actually effective steam horse-power from 1895 to 1907 was equivalent to an increase of the working population by about 28,000,000 men.

Here is the pivotal matter: the growth of mere numbers is not the chief thing, it is the union of workers with new forces, which enormously increases the production of goods and so the consumption of the people. This is the fundamental reason why labor depends upon the capital which alone can provide the new technic.

**The new
technic.**

¹ *Loc. cit.*, p. 23. The capacity of steam-engines in Prussia increased from 1,222,000 horse-power in 1882 to 2,358,000 in 1895, and to 5,190,000 in 1907.

In the use of gas released in coking, or by blast-furnaces, for generating power by gas-engines; in the use of water-power to create energy; in reducing peat, lignite, etc., into gas, by which extensive moors were converted into a source of new power; in saving ammonia as a by-product; in transforming the gas into electric energy, so that by power transmission it could be conveyed to industrial centres, and not used only at the place of origin; in the perfection of other combustion motors, and in the advantages of cheap land and water transportation for her goods, Germany was sharing in the general industrial revolution going on in all countries. Indeed, as was said, she was unable to use her phosphorous ores until an American, Gilchrist Thomas, discovered his process. For gains due to forces which are the common property of mankind no special credit is due to any one country beyond that for intelligence and readiness in their application to its own problems.

But besides making great strides due to the new age of progress, how much did Germany accelerate this movement by her own efforts? Only in such respects has she a basis for national self-complacency. Characteristic are the precision and thoroughness, the economy and thrift, of the people in general. As a consequence there is little waste, a low level of expenditure, and efficient labor, which together afford a low cost of production. Her resources in coal and iron are made available chiefly by the low costs due to the general technical gains of the age, but the existence of these deposits at home furnishes an individual advantage over countries without them.

In the scientific development of the principles of chemistry and their application to her industries, Germany has a special claim to credit. These gains, moreover, have

extended to physics and electrical theory. It is claimed for a German, Werner von Siemens, that his invention of the dynamo machine and the dependence of power transmission upon it was the basis for the applications of electricity in strong-current dynamics; and that in 1891 the first successful transmission of power took place from Lauffen on the Neckar to Frankfort on the Main.

Special
triumphs in
chemistry.

Liebig's work in vegetable physiology and agricultural chemistry have been distinctly German; but only more recently have the processes for using phosphoric acid, potash, and nitrogen to increase the fertility of the soil been of importance. These processes, however, are of common knowledge and freely used by other countries. Germany has no monopoly of these advantages. Her special progress in this direction is due to her political and internal organization, and to her ability to enforce good methods of cultivation upon all growers of foodstuffs. Still, in her large deposits of potash, she has a special advantage over other nations. In obtaining nitrogen from the air, she is gaining from her individual progress in using electrical power; but while earlier in this field, these methods, too, are common property, as well as the access to Chilean nitrates. Here, again, her advantage is due to the energetic application of general knowledge rather than to her own inventive-ness. The same is also true of the recovery of phosphorous slag from iron (by the Gilchrist Thomas methods) and its use in the form of phosphate flour as an artificial fertilizer.

Fertilizers.

Again, it has been supposed that Germany's marked industrial progress has been founded on a singularly effective system of training and education. In reality it will be found that her commercial schools have been a re-

sult and not a cause of her commercial success. At the present time there is no question as to the superiority of German technical and commercial schools; and the commercial success which led to the creation of the schools has undoubtedly been accelerated by their work. The technical high schools are intended for the training of managers and experts in the fields of architecture, structural engineering, mechanical engineering, electro-technics, industrial and administrative engineering, surveying and forestry, preparation for which is supplied by the lower technical schools, or the gymnasiums. These institutions are the response to the new world-wide industrial revolution. For artisans there are the middle and lower grade and special schools in which are taught wood-carving, pottery, glass-making, drawing, spinning, brewing, lace-making, milling, etc. Since 1887 the gains of German foreign trade and the development of her special technical and commercial schools have gone on hand in hand. It seems clear that as her commercial ambitions expanded the aid of education for material and commercial purposes was sought for, as a part of the desire to penetrate into the trade and industry of other nations. The first German commercial high school, that of Leipsic, was not established until 1898.

Without doubt, accuracy, precision, and exact knowledge have been stamped upon pupils; but there is a question whether the system has not produced a mechanical and narrow mind lacking in flexibility. Indeed, the German mind has a tendency to heaviness, and the methods enforced from above lead to a reliance on cut-and-dried rules for all operations so that there is no premium on initiative. Outside of his special *Fach*, the German

Industrial
education.

Mechanical
nature of
German
education.

student does not know how to think in an unexpected emergency, as does an American student. To teach what ought to be believed, and the methods by which certain policies dictated from above can be furthered, does not result in a true scientific mind. The inability of German diplomacy to understand the springs to action of other peoples seems to be an inevitable result of the too mechanical nature of German education, and of the belief that mere energy and industry, if persisted in long enough, can produce spiritual results.

Therefore, in studying the causes to which her amazing industrial progress is due, we are led to the necessary conclusion that the special contribution to her success which is essentially German is her genius for efficient organization. Most countries, not realizing the full meaning of the industrial revolution and the need of enormous capital

Germany
facilitated
centralization
of industry.

investments to provide the new technic which would magnify the productive power of labor, were slow to accept the new régime, being influenced by the rising tide of agitation which claimed for labor the gains in production due to this new order. The necessity of large production, of consolidation and centralization of business, in the new era was quickly recognized by Germany. From 1882 to 1907 the number of persons engaged in small concerns increased only one-fourth, while in the largest concerns four-and-one-half fold. Moreover, the various processes of production were centralized under one head, not only in industry but in agriculture, where dairies, breweries, sugar-factories have become a part of large establishments. The trade combinations have taken in coal-mines and iron-works. In Germany, instead of ignorant antagonism, as with us, there has been intelligent supervision and co-operation by the government which

has facilitated industrial organization adapted to the new methods. Under the name of syndicates, *Kartels*, etc., there have been developed organizations of a wide range,¹ including similar or related establishments—which with us are regarded as criminal. In Germany, however, the constituent companies maintain a nominal independence, but enforce agreements as to production, prices, and competition. The state approves such organizations to the end that there may be more and cheaper products for the consumption of the people.

More than this, the German Government, with an assiduity and expert aid not known in any other country, has consciously and with great energy and skill become the ally of trade, both domestic and foreign.

German
Government
an ally of
business.

It initiates and supports new enterprises; owning the railways, it grants special traffic rates for exports; it builds canals with public funds, in order that industry may obtain low rates on heavy materials; it stimulates and subsidizes international steamship-lines; it forces the development of colonies; it has helped in establishing banks for foreign operations, and put her banking resources at the service of foreign trade; it bullics other states to gain commercial privileges; it has used its political power to good effect in gaining control of the trade in southeastern Europe and Turkey; it employs its diplomatic body, the prestige of its military power, all the pressure of the government, to control ports, obtain concessions for opening mines and building railways, and to expand its commercial influence in other lands. How well Germany has succeeded in this

¹ The Krupp establishment combines coal-mines, coking-plants, iron-mines, smelting-works, steel-working (machines, cannon, munitions of war, armor-plate), electrical works, river transports for coal and ore, and ocean-going vessels.

policy has only been revealed by the events of the European War.

Germany's remarkable progress from 1880 to 1910, we must then conclude, has been in very large measure due to the general industrial revolution, which she did not originate, but in which she shared with all other modern nations. The rapidity of her progress must be explained by the relatively backward position from which she started.

Special
German
qualities for
success.

When the opportunity came to her after the establishment of the empire, there were no handicaps applied to prevent her catching up with her competitors. But to opportunity she added exceptional qualities of energy, persistence, training, docility under bureaucratic rule, thrift, industry, and a genius for organization. To this extent she deserves no little credit for conscious effort, but in the main she was only one of the legatees of the general industrial renaissance. The man standing on an *escalator* rises from no effort of his own; but if he adds his own force by also walking upward on the moving steps, he proceeds faster relatively to stationary objects. Such seem to have been the causes of her progress.

§ 5. The outcome of her industrial development has directly affected Germany's foreign policy. The prodigious growth of her productive forces at home has made her dependent on the importation of raw materials to be worked up into finished goods; and, in turn, made it necessary to maintain foreign markets for her finished goods. Therefore, she has come to regard it as a national duty to "guarantee" a supply of raw products through the possession of colonies.

Foreign
markets.

It has been assumed by Germany—not necessarily on

economic but largely on political grounds—that she must own the territories from which she draws her materials, and to which she may export. Here is an assumption which cannot be accepted; for it cannot be proved by experience, even in

Ownership of
markets not
necessary to
trade.

German trade. Trade does not follow guns and war-ships, nor arbitrary governmental decrees. Classical examples of the success of the carrying trade by unwarlike nations are to be found in the development of shipping in Holland, Norway, and Italy. From all time nations have carried on trade without owning the ports or territories to which their ships go. Indeed, the old time-honored colonial policy of Europe, by which colonies were used as a means of aggrandizing the mother country, has long ago been outlived and discredited, because it was crippling the normal movement of goods. Goods move in international trade on the economic basis of a difference in comparative costs. We send the goods in which we have a relative advantage, and with them buy the goods in which we have a relative disadvantage. It is an economic commonplace to say that this is the reason for the very existence of foreign commerce.

Moreover, Germany's silent commercial conquests in the trade with Russia, England, southeastern Europe, South America, and the United States have gone on vic-

German and
British trade
reciprocal.

toriously in territory owned in some cases even by her rivals. Her commercial penetration of Russia has been due to industrial efficiency and low costs. Before the war both English and Germans had built factories in Russia in rivalry, and sometimes in collaboration. In regard to German trade with England herself, it is common knowledge that English markets were flooded with German goods, so that "made in Germany" became a commercial shibboleth. In short,

British companies freely carried on operations in Germany, and German companies and banks were established in Great Britain. Trade is reciprocal, and these rivals were necessary to each other. In 1911 exports from Germany to the British Empire amounted to \$360,725,000, and the goods sent by the latter to the former were valued at \$442,475,000. There were evidently no restrictions on trade beyond those set by protective tariffs and relative advantages. The British took from Germany sugar, electrical and mining machinery, and mechanical products of the new technic. In return, they sent to Germany products of the older technic, in which the British retained their superiority, such as agricultural and textile machinery; and, in addition, raw materials to be used in the chemical industries, together with yarn, wool, hides, as well as articles of luxury and fashion, like leather goods, laces, cloths, plate glass, porcelain, china, best grades of paper, etc. Gradually it resulted that Germany, as she gained industrially, was buying less from England and England was buying more from Germany. Again, French and German bankers were freely competing in Russia and Turkey, and in the Balkan States; while the British were aiding the Turkish navy, Germany was reorganizing the Turkish army. How, then, could it be said that Germany's trade was hindered in these countries?

Without doubt, something more than the economic gains of peace entered into the national aspirations of Germany. If the conditions before the war brought to her the greatest progress obtained by any other country in the last thirty years, then the retention of those conditions was the thing most to be desired. Her phenomenal commercial gains were in themselves proof that she had the freedom of the seas. How else could her foreign trade and her shipping

Freedom of
the seas.

have grown so amazingly? The facts show only too clearly that she had the freedom of the seas, and the entry of her goods on equal terms in all ports of the world where her costs allowed her to undersell. Equally clear is it that her cry for the "freedom of the seas" was born of a plan for herself so to control the seas that, when war came, she would be dominant on the ocean as well as on land.¹ She already had freedom of the seas for peaceful commerce; but an exaggerated ambition looked to dominance on the seas in time of war. Such appears to be the only possible explanation of her foreign and colonial policy.

Obviously, her colonial and foreign system seems to have been a result of an industrial success which gave her the strength to aim at extensive conquests of territory.

This affords an explanation of her unwarranted theory that possession of territory is necessary to the expansion of trade. But, inasmuch as her development came late, other countries, especially England, had been before her in colonial expansion. A naïve egotism, swollen by undreamed-of commercial success for a country relatively poor in wealth, seemed to drive her to anger against the one country, England, which had led the way in the change from handicraft to machinery, and which was now

German
foreign
ambition a
consequence
of success in
industry.

¹ "Germany—which is compelled by its geographical position and its experiences in history to maintain a land-army equal to all contingencies—had also to decide to protect its ever-growing and expanding economic relations over the seas by building a navy strong enough to nip in the bud any temptation, on the part of any enemy, to crush our economic competition by force. Our navy, the creation of our Emperor, is, in this sense, the keystone in the mighty system to which is due the extraordinary development of wealth in Germany, and which to-day constitutes the basis for the existence of the German people." Helfferich, p. 85. The power to develop a navy has been a consequence, not a cause, of the industrial development, and is a means of using these gains for national ambitions.

found to have been established in the most productive colonies throughout the world. The German hatred of England is born of commercial rivalry. It is the childish *naïveté* which believes it has a right to something possessed by another simply because it wants it. In furtherance of this desire was a concept of the state which had no code of morals, and to which everything was permitted provided it achieved success.

Perhaps the German point of view can in no way be more clearly or authoritatively stated than in the following words of Helfferich:

Our dependence upon foreign countries, the counterpart to the great advantages derived by us from having taken our place in world-economy, calls for stronger counterpoises. Such a counterpoise can be created by German enterprise and German capital establishing a field for their activity beyond the borders of our country, and thereby gaining a direct influence over foreign territories that may be important to us as sources of supply and as markets. This can be done in an effectual way by acquiring over-sea colonial possessions; for in such case economic influence is secured and strengthened in the most effective manner possible by political domination. In so far, however, as this way is limited or barred up altogether—for when Germany, after the restoration of its political power, first cast its eyes over the seas, it found unfortunately that the colonial world was already for the most part occupied—our end must be reached by means of a far-sighted financial and economic activity (p. 81).

The war has disclosed the true meaning of many innocent words in *ante bellum* literature. The plan of a commercial organization over *Mittleuropa* strengthened by strong political ties enforced by Germany lies behind such exposition as this:

Their [German merchants in other countries] commercial, manufacturing, and agricultural undertakings, although rooted

in a foreign soil, are an important support for Germany's position in the world's business. This is especially true of the works of civilization on the grandest scale which

German industrial penetration. German enterprise and German capital have created in the course of the past few decades in non-European countries: the great electrical undertakings, irrigation systems, and especially railways, which—like the Bagdad Railway and the Shantung Railway—open up anew *under German direction* extensive regions and develop them into sources of supply for our import trade and into markets for our exports. *Ibid.*, p. 84.

The claim often made that Germany had need of new territories, because her increasing population had no room at home is belied by the facts. The rise of the new technic had caused a demand for additional industrial workers, and has stopped emigration; since, like England, a small area can retain a very large manufacturing population, if their imported food can be bought by the export of finished products. It seems evident that ambitious expansion has not been due to lack of room for her people at home, but rather that, because of great industrial gains, national conquests have been rendered possible.

§ 6. Having before us the facts of Germany's remarkable and rapid industrial development since 1880, the coincidence of the organization of the empire with the beginning of the greatest industrial revolution in history, and the general and special causes at work to produce this advance, we are next led to study their influence on the direct causes of the war.

One patent fact stands out above all others: in the teeth of competition with the richest, most experienced commercial countries, with those longest entrenched in successful trade, Germany, in the three decades before

the war, made greater strides in production and commerce than any other modern nation. If so, why was she not content? If she really believed England to be decadent, to be rotting in gross materialism; that France had lost her fibre and was given over to political degeneracy—then why not let them go on in their fatuous course, dead to all efficiency, while she was rising every day to new commercial victories, even in French and British markets. In spite of clear warnings and explicit accounts of the methods by which Germans were successfully absorbing the world's markets, French manufacturers and exporters refused to wake up. Why not let them remain asleep, while reaping the triumphs of peaceful industry?

German
ascendancy
without war.

If Germany wished the entry of her ships into all the ports of the world, the very facts of her advance in foreign trade and tonnage show beyond the shadow of a doubt that she achieved that end in times of peace. The "freedom of the seas" was hers in fact and in deed, without owning the ports into which she sailed on equal terms with Norwegians, Italians, or British. She had no summons to war to gain what she already possessed.

She had succeeded in a most remarkable commercial competition by reason of the national qualities of energy, foresight, persistence, efficiency, and a genius for organization. Her government, moreover, took on paternalistic powers, assuming direct oversight of the physical, moral, and intellectual effectiveness of the individual; and German docility under autocratic direction acquiesced. There resulted the greatest example ever known of state socialism, or management of industry and the acts of individuals by the state, but headed by an absolute government of a personal Kaiser in which the proletariat had no voice. It was a

State
socialism in
Germany.

government by autocratic experts, whose high efficiency presents a telling argument in favor of the absolutism under which it flourished, and thus formed a strong bulwark for the reigning dynasty in an age in which the demands of the proletariat for an increasing share in the government were steadily advancing. The weakened republican government of France stood out in bold contrast to the forceful and efficient absolutism of Germany. Then, why did Germany not let well enough alone?

In truth, we are forced to find some other cause for the war than the chance for industrial development. Without doubt it was the exceptional growth of industrial power and efficiency which fed and gave opportunity for a colossal national ambition. Since the Franco-Prussian War of 1870, one would be indeed blind not to see everywhere in Germany evidences of a "swelled head," of a "feverish megalomania." With the new wealth there came extravagance and the vulgar enjoyment of riches by the *parvenu*, unused to the refinements of life. The increased national production gave the means for spending more funds on the army and navy. Militarism had no direct influence in furthering industrial efficiency beyond emphasizing the national qualities of docility, obedience, and promptness. Extended militarism was a result, not a cause, of the increase of productive power; because, if the national ambition were to be carried out by conquest, it was the new wealth that gave militarism its chance. It was the spirit which guided the use of the new wealth, and which lay in the mind of absolutism, that determined the action of Germany and the direction of its dream of power. When Germans speak of a war for "national existence," for "a place in the sun," they mean the use of war to permit the realization of their

Militarism a
result, not a
cause, of
industrial
power.

colossal ambition to be a world-power whose will cannot be limited by the military—or naval—power of any other one country or of any group of allied countries. When they demand “the freedom of the seas,” they mean such control of the seas by a German navy that *in time of war* no other country can stop her commercial marine from sailing the seas. Their growth as a marvellously successful commercial country was only a means to a militaristic end.

We are thus inevitably led face to face with Russia and southeastern Europe. The geographical position of Germany precluded much progress to the north or west; her hope of conquest lay to the southeast through Austria-Hungary, the Balkan States, Constantinople, Turkey in Asia, Mesopotamia, and the Persian Gulf. The colossal dream of

Direct
cause of
the World
War

Mittleuropa gives the key to her Russian policy. If Russia were allowed to build up friendly Balkan States, strengthen Serbia, handicap Austria-Hungary, and throw her huge bulk across the way to the Persian Gulf by attaining Constantinople, Germany's ambition was destroyed. The Sarajevo assassination was only a lucky pretext for action in 1914, intended for the year before. German diplomacy emphasized the desire to “localize” the conflict between Austria and Serbia; always provided the German purpose through Austria-Hungary to prevent Russian domination in the Balkans was accomplished. When Russian mobilization in support of Serbia began, it was directed against Austria-Hungary. In reality it was a move against the German dream of *Mittleuropa*. When Germany made Austria-Hungary's cause her own, and demanded the demobilization of Russia, the real issue was joined, and the struggle transferred from Serbia to Russia, with the consequence of a general European war

to decide the power of Germany to rule Europe, and thereafter the world. If Germany were to conquer, Great Britain would be taken in hand separately; so she was forced to join the Allies. If the Allies should be beaten, the United States would later be separately forced to accept German dictation, of which we were given a taste by their submarine warfare. So we were of necessity obliged to join the Allies. The problem for the world was whether the dream of German absolutism should be realized by the conquest over free peoples. It is mere deception to speak as if Germany had been deprived of the chance for unlimited industrial and commercial growth in times of peace, and that she had to go to war for the right to legitimate economic development.

CHAPTER II

WAR AND CREDIT

Nature of credit—Relation of money to credit—Relation of credit to wealth and capital—Credit drawn in terms of money—Credit and fiscal policy—Unnecessary consumption—The surplus of society—Destruction by waste—Destruction of capital in war—Loss of labor force—Economic exhaustion of surplus—Financial mobilization—Credit based on average productive power—Surplus greater than supposed—Case of a nation cut off from outside borrowing—Functions of credit during war—How demand obligations are met.

§ 1. When Lord Kitchener based the success of the Allies in the European War on "men, munitions, and money," obviously he used the term "money" in the sense of credit. Out of every five dollars spent at least four dollars is obtained by credit. Since more than \$100,000,000,000 has already been spent by European Powers on the war, it is clear not only that no such sum of money was in existence, but also that war has not destroyed actual money. For instance, there is even more gold in the world to-day than before the war; and certainly there is much more paper money. In brief, it is wealth, or goods, in some form which has been destroyed; and it is only the prices of these goods expressed in money which count up into the enormous totals. These goods were priced in some monetary standard, like gold; and some money may have been used in the exchanging of the goods from seller to buyer; but it was the modern credit system which made the use of much money in this process of exchange quite unnecessary.

The important thing to a country's prosperity is not the amount of money nor of a medium of exchange which it has within its borders, but the volume of goods it has which satisfy wants. It is not the tickets by which the milkman counts, but the number of quarts of milk, which are primary. In foreign trade, likewise, the matter of chief importance is not the quantity of bills of exchange, but the actual production and movement of grain, cotton, munitions, and the like, in exports or imports. Only because of the movement of such goods, or of securities (which are titles to goods and property) do bills of exchange come into existence. That is, want-satisfying goods are primary; money and forms of credit are secondary. Goods underlie all legitimate and continuing credit operations. When saying in general terms that credit is based upon goods, it is understood, of course, that it is concerned not only with goods actually in existence now being exchanged, but also with goods coming forward day by day, in the steady operations of established industries, as well as with securities of various kinds, which are in fact titles to goods or to going concerns engaged in providing economic services.¹ Money, gold, checks, the various media of exchange, are only convenient devices for expediting essential transactions in goods. Although credit is itself an exchange of goods involving the return of an equivalent in the future, the forms of credit arising out of such transactions are various—book accounts, bills receivable, notes, checks, bills of exchange, and the like. Some forms of credit—such

Goods are
primary;
money and
credit are
secondary.

¹ "Credit depends on the assumption that goods produced will come to market and be sold and that securities that are based on the earning power of production will fetch a price on the exchanges of the world." Hartley Withers, *War and Lombard Street*, p. 4.

as checks or bills of exchange—also serve as media of exchange, if made payable on demand by recognized institutions, and thus perform some of the work of money.

The funds needed on the unexampled scale of modern wars can be obtained either by taxation or by loans. Obviously taxation, even as heavy as that now levied by Great Britain, can provide only a part of the great sums consumed by this war. Therefore, the main reliance of all the belligerents must be on loans, that is, on the use of credit. When it is asked, "Where does all the money come from to carry on this stupendous war?" it will readily appear in answer that the cost of war is largely represented by the destruction of goods, referable to money only as a means of recording their value, and that money plays a rôle secondary to goods. It is the quantity of goods demanded by war which forms the real economic expense of this terrible struggle. Money remains; goods are destroyed. The war is really being carried on by credit.

The war
carried on
by credit.

To obtain credit is to gain possession of purchasing power over goods. If credit is given, there is very little difficulty in finding a medium of exchange by which the purchasing power can be exercised in any direction needed. Hence, the really important problems in financing a war have to do with the extent, soundness, and maintenance of a country's credit. How, then, does any individual, company, or government obtain this purchasing power inherent in credit? Of course it can be given only by persons who have control over goods, or by institutions which deal in credit transactions, that is, by banks. Banks are created by those who invest capital, not in farming or mining, but in the business of supplying credit, or purchasing power, to those who apply for it. To an individual applicant why should

Why credit
is given.

credit be given? Only if evidence can be given that he will repay at the future time agreed upon. The possession of wealth, continuous producing power in a going industry, a reputation for integrity and keeping a promise, the pledge of securities which are titles to wealth or control of sources from which wealth can be drawn at call, are accepted as sufficient guarantees for the certainty of repayment. The varying legal forms of credit arise from varying agreements between the contracting parties as to the certainty and method of securing repayment. What is true of the individual is true of the state. An individual may get goods on a book credit at a shop, or by giving a promissory note to a bank, or by the creation of a bill, or acceptance; in the case of the state, by giving a short-time obligation or by giving a national bond, engaging to pay interest from year to year and the principal at some future date. In all borrowing there is a case of simple buying and selling, as in any shop; the lender sells the right to draw on him at once, and the borrower gives in return the obligation to pay a definite sum in the future. A bank sells a demand right, and buys the right to payment in the future. The borrower gets immediate purchasing power; the bank does the waiting, and takes the risks involved in it. The phenomenal development of modern credit is due to the recognition that giving present purchasing power on a guarantee of future repayment can, with experience and good judgment, be carried on with practical safety; and the extension of the field of credit has gone *pari passu* with the enlargement in the production and exchange of goods. In the main the obligations are paid off, if goods are steadily and normally produced and sold. There is a vast difference, however, between commercial credits at a bank, where the term of the loan is short (such as

ninety days), and an investment in a national bond running often many years to maturity. Commercial banks, therefore, have constantly liquid assets, by which they can meet all demand claims; but demand liabilities cannot be met by assets consisting of long-term bonds.

When a state borrows, the source of the means of repayment exists not only in the total wealth of its people, but also in the skill and judgment with which the state derives its national income from that wealth by taxation. The ability of a government to borrow and to obtain enormous sums of purchasing power over goods needed in war thus depends not only on the wealth of the country, but also upon its sound finance and the skilled mobilization of its resources. A country having vast natural resources, like Russia, may not borrow as effectively and cheaply as a poorer country which is financially better organized.

A government
borrows
goods, not
money.

In obtaining credit a state must act as a borrower. Just as in private borrowing, the applicant wishes immediate means of payment, while the lender is to be repaid only in the future. Therefore, for all sums beyond those that can be raised by taxation, the state must go, in the main, to the private credit organizations of the people to get that present purchasing power which is the urgent need. There is thus brought to light the fact that the power to lend is not a creation of the state, but is a result of the slow accretion of capital and surplus wealth in the hands of individuals and institutions of credit. The ability to get quick purchasing power by the government on an enormous scale, therefore, depends on the credit power of its citizens, or those of friendly countries. It cannot buy munitions and supplies unless it can transmute its future

Must borrow
of its
citizens.

production, by credit operations, into present means of payment. If present goods are not obtainable, it cannot keep men in the field.

§ 2. Credit does not create capital. Capital functions as economic goods given over mainly to productive uses, and originates through saving. To give credit or purchasing power over goods does not increase goods, except by making capital more active and by increasing its efficiency in production through enabling it to go where it may be most needed. Credit gives capital mobility.

More than that, credit widens the exchangeable power of wealth. All salable, liquid wealth becomes a basis for granting commercial credit, and itself becomes a source of purchasing power to its owner, independent of the quantity of money he holds. Credit coins all such wealth into purchasing power; and, when expressed in terms of standard money, the dealings seem to the superficial observer to be transactions in money when in truth they consist of transactions in goods. For instance, the demand deposits of commercial banks are not, as supposed, the outcome of money deposited, but chiefly the credits granted to borrowers based on paper arising from the sale of goods. In other words, all bankable property enters the circulatory movement of goods which are being exchanged against each other, with only a minimum use of money for bank reserves, or for small change. Thus credit, individual or national, enables the borrower to obtain immediate means of payment, and postpones to the future its repayment. The state, which borrows usually on long time for its permanent debt, pledges its future producing power in return for present purchasing power over goods.

Credit and capital.

Credit coins wealth into purchasing power.

If anything like war intervenes to disturb, or to cut off, the normal production of goods, on which forms of credit are based, the whole fabric of credit, exchange, and payments is directly affected, even though no money is destroyed. Credit operations, though based upon the movement of goods, are, as we have said, always drawn in terms of money and give the impression that the dealings are in money. Before the war began the enormous exports of Great Britain would normally be paid for by imports of various sorts; but the outbreak of war suddenly stopped the movement of goods. That is, obligations due to the British could not be liquidated by the proceeds arising from the sale of goods. Hence, there was the call for that amount of money (*i. e.*, gold) which expressed the value of the goods sold. Then, it was discovered, with seeming astonishment, but with a certainty which should have been expected, that actual money equal to the credit transactions in goods could not be had. Thus was enforced the truth that credit is really based on goods, and not on money; and that the final liquidation of these pre-war obligations must wait on a later production and movement of goods. Issues of paper money do not repair the stoppage of production, because the subtraction of goods is the pivotal matter, and printed slips of paper are not substitutes for goods demanded by consumers.

Credit based
on goods, not
on money.

In trying to understand the credit operations of this stupendous war, in which we are now involved, it is necessary to keep in mind the distinctions between money, credit, and capital, and the difference in their functions. In the actual operations involved in financing the war we shall have to discriminate between those affecting (1) money, (2) credit and banking (which is only the practical applica-

Money,
credit, and
fiscal
operations.

tion of the principles of credit), and (3) fiscal policy, covering the operations of the state in taxation, borrowing, and expenditure—although, as we shall see, one of these may react on the others. The play of credit is subtle, and affects both the others.

§ 3. Credit, being directly related to the production and exchange of goods, is therefore directly affected by the volume of bankable goods destroyed in war. In fact, the power of a belligerent to continue fighting depends not only on its own productive power, but also on its ability to obtain purchasing power by credit from others. It becomes, then, a question of having surplus goods over and above the necessities of life.

In studying the destruction of war, moreover, we must not omit to compare it with a similar destruction which has been going on in times of peace through the wastes of extravagance and vanity. To most people this saying is a block of stumbling and offense. We have become so accustomed to the use of luxuries and unnecessary articles that when they are withdrawn in a sudden emergency we are apt to regard their subtraction as a great disaster. And yet very little of our daily consumption is really essential to health. Indeed, all that large part of it which is not needed for the actual maintenance of the body in full health is superfluous. Only the primary satisfactions—those for healthful food, clothing, and shelter—are really essential to physical well-being. Men leave the fat and stuffed living of the city to spend some summer months camping in the woods, where they have the simplest cuisine, the slightest shelter, and the roughest clothing, and yet they emerge restored in strength and animal spirits. If we stop to think, it must be obvious

Most of our
consumption
superfluous.

to us that we could give up the largest part of our habitual peace consumption and not only maintain but even improve our physical condition.

The whole history of a growing and diversified consumption is a story of the development of human wants. Not content with the satisfaction of the primary needs of simple food, clothing, and shelter, men have enlarged and differentiated their wants without limit as civilization has spread and brought new desires. Not being mere animals, and not content with mere physical requirements, they have developed endless wants of an æsthetic, pleasure-giving, intellectual, and spiritual character. There being no limit to human wants, their satisfaction is limited only by the power of society to produce the concrete articles and yield the services which meet these wants. The productive power of society is dependent on division of labor, natural resources, intelligent management, racial adaptability to industry, efficient labor, invention, the spread of mechanical methods, and an abundance of capital to allow "round-about" productive operations. Nevertheless, it remains true that for a considerable period of time we could, in a great emergency, go without all but the primary needs of life; while it remains equally true that to-day the most considerable part of our productive forces are normally engaged in giving forth satisfactions beyond those for our primary needs.

The accumulated capital of the race, working with its laboring force, is occupied in producing objects of desire, the largest part of which enter into the surplus of society in excess of the minimum as above described. If, therefore, labor and capital formerly engaged in producing unnecessaries cease to work, society will have no stocks of this kind

Wants.

Waste by
extravagance.

of goods which they can buy; or, if the owners of wealth withdraw their demand for unnecessaries, either because of some common wave of sentiment, or of alarm for the future, or of a sudden desire to save, or of a loss of income, this labor and capital will not be employed in producing them. It must be clear, then, that a vast consumption goes on in times of peace, in return for which no new goods are produced; that is, tangible goods are destroyed, without resulting in subsequent production. While laces, wines, or food are used up by those who consume them for personal pleasure or luxury, wealth to that amount is lost just as certainly as if they were war goods destroyed on the battle-line. In the latter case there are no personal desires satisfied; only a loss without any compensations but the supposed gains of war. If A produced 100 units of goods at an outlay of 80, and B did the same in other goods, then if A's goods were exchanged against B's, they went to consumers, and satisfied desires (of all kinds, some harmless, some lofty, some vulgar), even if these goods were not used to hire workmen to produce other and new goods. Looked at from a purely economic point of view, we cannot regard the enormous destruction of wealth in war as something very different from what has been going on in peaceful days, through unproductive consumption. The purposes of the consumption (being for civilized ends as against the killing of men) may be widely different; but the economic, material result may not be so very different. Were the destruction of war accompanied at the same time by a really effective cessation of unproductive civilian consumption, a country might emerge from the war almost intact in an economic sense—having lost, of course, the satisfactions from the gains of art and luxury. These are the reasons why statesmen, during the strain of great expenditure in war,

urge upon their people the need of economy, or the cessation of unnecessary consumption.

§ 4. The destruction in war, however, goes further and deeper than the loss by unproductive consumption during peace. It involves the whole philosophy of consumption, into which we cannot here go; but certain considerations of destruction and credit are essential to our purpose.

The disappearance of wealth in the European War, we all know, is going on to a frightful extent. It, of course, reduces the margin from which savings can be made and from which capital is created. Great as is the destruction of wealth, however, it is not so vital as the destruction of capital. The destruction of wealth, hurtful as it is, is like the loss of a farmer's yearly crop of apples; he may get on without apples until the next season. On the other hand, the destruction of capital, since it is one of the factors devoted to the production of new wealth, is like the entire loss of the apple-tree itself; the farmer can never again have apples of his own until a new tree has been grown. It is important, therefore, to know whether it is wealth or capital which is being destroyed in this war.

Distinction
between loss
of wealth and
of capital.

In order even to be maintained without diminution, capital, which in active production is constantly changing its form and being restored in new goods, must be replaced. A, in producing 100 units of goods, expended, perhaps, 80 units of capital. A producer, B, in another field will have done likewise. A and B, typifying all producers, exchange their finished goods with each other. When A gets back in exchange the proceeds of 100 units of new goods, he must set aside 80 out of his gross returns to replace the 80 units of capital used up in the produc-

tion of his original 100. If so, his capital is restored and he can go on producing another 100 in the future. So with B. The replacement of 80 in each case is essential to the mere maintenance of capital and industry on its present scale, without any increase.

The characteristic effect of war upon industry in each of the belligerent countries has been the violent and sudden transfer of labor and capital on a phenomenal scale from peaceful occupations to those producing war supplies. Labor and capital were diverted from making peaceful buildings, factories, machinery, canals, merchant-vessels, docks, to making guns, shells, and equipment—which, when consumed, vanished, without return. If A transfers his capital from normal industry to manufacturing munitions of war, his outlay of 80 yields 100 in goods sold to the government, which, as we have seen, destroys them without reproducing anything in their place. The government, unlike B (in times of peace), does not return goods to A by which he can replace his 80 units of capital and thereby go on producing in the future. That is, when shells explode on the firing-line, A's 100 units of product, and so the equivalent of his 80 of capital, are destroyed forever. A is able, in fact, to go on producing, because in return for his 100 units the government gives him purchasing power in a promise to pay—either paper money, or treasury notes, or long-term bonds—which are forms of credit based upon future production after the war. But, quite apart from the external means of payment, the sinister fact emerges that capital has been destroyed and not replaced. We cannot get away from the unmistakable reduction in the capital of the country. This is basic to our study of war and credit.

More direct losses occur when, as in the retreat of

How war
destroys
capital.

the Germans on the Somme front, there is a thorough destruction of cattle, crops, fruit-trees, forests, lumber, tools, rolling-stock, factories, mines (as at Lens), houses, and even of the soil itself under high explosives on the battle-field. Not only are existing goods reduced, but there is lost also the capital by which future goods can be produced. Hence, not only circulating but even more or less fixed capital has been destroyed in the territory occupied by an enemy, as in Belgium, northeastern France, East Prussia, Serbia, and Rumania. The basis of credit is to that extent undermined. As soon as there is no commodity basis behind credit operations, bankruptcy—or an inability to meet demand obligations at any instant—is not far off. The total of goods produced and exchanged by a belligerent forms the basis for its credit; but if, by the necessary results of war, the productive power of the people and its surplus above the necessities of life are reduced, that country's credit is *pro tanto* weakened. Only if a nation can go outside its boundaries to neutrals or to friendly allies, where it can borrow the goods of others to fill up its own present losses, can its status be maintained intact. When, as in the case of the Central Powers, credit must be limited by the productive power at home, the basis of credit is directly undermined in proportion as the destruction of war goes on.¹ To say that debts which are a measure of losses are an advantage if confined to its own people, is only self-deception.

Loss of goods
removes
basis of
credit.

¹ If Doctor Karl Helfferich is correctly quoted in his budget speech of December 14, 1915, we have an amazing example of poor logic and economics in the following: "We are paying almost exclusively to ourselves, while the enemy is paying abroad. Therein lies the guaranty that in the future we shall maintain the advantage. . . . [Germany] can bear to become poorer and always remain what she is." She certainly cannot maintain her production and credit under constant destruction without replacement from outside while the war lasts. What may happen in the decades after the war is quite another matter.

The most serious blow at production and credit by war, however, is given by the killing and maiming of its laboring force. Capital and wealth can be again restored by economic processes, but not so human life or perfect limbs and eyes. How far the directing and managerial skill has disappeared cannot yet be estimated. The immediate effect has been diminished production of all goods but war supplies; and to that extent the loss of labor force has lowered the basic support of credit. In the Central Empires scarcity of labor has weakened the efficiency of railway transportation, reduced the output of coal, and diminished the production from the soil—except such as can be continued by prisoners, women, boys, and old men. Nevertheless, in less than a generation, under the ordinary stimulus to increase of numbers, we may expect to see the full labor force again restored. In an even shorter time the losses to capital will have been made good, and probably the unusual stimulus to thrift after the war will have even enlarged the world's capital, and so the production of goods on which credit depends.

§ 5. In view of the colossal expenditures in this war, it had been thought that it could not long continue before economic exhaustion would be reached. In spite of unparalleled losses of wealth, capital, and men, however, the struggle has gone on into the fourth year of the war. Evidently solvency, in the ordinary business sense, is no more obligatory to the continuance of war by a belligerent than in the case of a bankrupt railway which continues to fight its solvent rivals; in each case they are relieved from meeting their immediate fixed charges out of normal income. By what processes, then, does a country at war meet its enor-

Effects of
loss of men.

Economic
exhaustion.

mous expenditures? Obviously not by money, but by credit. The limit to expenditure is to be found not merely in the surplus of goods over necessities capable of being produced by a country, but also in its power to borrow from the surpluses of other countries. The limit to credit is ultimately in goods, home or foreign. A government does not borrow money, but purchasing power over goods; because the value of these goods is expressed in money, and the totals of loans are also thus expressed, it does not change the basic fact that it is goods which are really borrowed.

Economic inconvenience is reached when there is an interruption to the normal consumption of civilians. There is, of course, a falling off in the production of articles formerly in demand. There is evidence of prosperity in war industries, because by expending borrowed funds for war supplies the government causes a forcible diversion of demand into new directions where there is, also, a stimulated demand for labor (which quickly reduces unemployment). This inevitable reduction of civilian consumption does not, however, affect the ability of a country to continue the war. As yet it is only an inconvenience. The habitual coffee-drinker may not be able always to have coffee for breakfast; many may have to give up butter or jam on their bread; constant meat-eaters may be very largely cut off from meat; the woman of society may not only fail to get the same color effects in her dress, but may even be cut off from buying new clothes; the heavy income tax may cut off wine and force a large reduction in servants; but the war will not thereby be stopped. So far as non-combatants are concerned, the war can go on as long as they, and the laboring classes in particular, can satisfy only their primary wants. That is, eco-

War may go
on to the
limit of
surplus goods.

conomic exhaustion is reached only when the surplus of production over the necessities of life has been wiped out by turning the efforts of industry into making war supplies.

So far our analysis has been directed to the basic matters of the production and consumption of goods. These fundamental considerations, however, are usually hidden from sight, because attention is popularly given to the external phenomena of money and finance. To many minds the possibility of continuing the war—apart from men and munitions—seems to pivot upon the ability to “finance” their increasing expenditures. What does financing in this sense mean? Obviously it is a series of credit operations arising out of loans and their use in obtaining war supplies. On the surface it is a question whether the government can pay for its extraordinary war expenditure. In providing a superficial means of payment there is a wide scope for deception of the people if there can be created notes and promises to pay, even though there is behind them a diminishing basis of goods to be got by taxation, or by means of loans. Any state can get sound means of payment only from the wealth or goods owned by its own citizens, and turned over to the state, or by loans in foreign countries which gives it control over goods there. Water cannot rise higher than its source; nor can a nation spend more than the wealth or goods it can obtain by taxation or by borrowing on credit. The amount of bank-notes, or paper money, it may issue, or the billions of bonds it may sell, does not increase its wealth one whit. On the contrary, they are evidences of the burden of debt incurred.

Successful financial mobilization consists in meeting extraordinary war expenditures by a means of payment

Financing by
issues of
paper.

acceptable at a given point of time to the sellers of goods. Taxes and loans on a large scale are turned over to the Treasury mainly in claims to deposits in banks; and the Treasury is able to pay by transferring these claims to its creditors. In view of the enormous transactions carried through by credit and banking devices in the exchanging of goods, no great addition, if any, to the quantity of money in circulation in ordinary times is needed simply for a medium of exchange in aiding the transfer of goods in war time. Hence, not only must a beligerent have wealth as a basis for credit, but it must have the skill to marshal these resources in the form of acceptable means of payment at the time and place required in order to cover its expenditures as the war goes on. Consequently, there may be a difference between financial exhaustion and economic exhaustion; for a country with large resources badly mobilized may be financially crippled, and yet not be economically exhausted in its surplus of goods. In the American Civil War the Northern States were often financially bankrupt, yet their economic resources were not exhausted; the South yielded not because of financial mismanagement, but because of its economic exhaustion. Likewise a country like Russia, under the rule of the Romanoffs, having immense potential resources, may by corruption, dishonesty, or inefficiency have become financially weak, because her vast resources were not turned into satisfactory means of payment. For this reason Russia has had difficulty in paying for its foreign purchases, and has been early aided by English credit. Her food supplies are indefinitely large, and her men and goods might furnish a long-continued power for fighting—provided she gets the munitions and credit and wishes to fight. To be decisive, finan-

Financial and
economic
exhaustion
not
synonymous.

cial exhaustion must be reducible to economic exhaustion.

Under skilful financial mobilization of resources, as in Germany, the end might come—other things being equal—only when the surplus above necessities has been exhausted; if there should not be enough food for both soldiers and civilians, there would be evidence that the line of necessities had been passed. Nor will war cease merely because of the piling up of enormous debts. So long as a belligerent can obtain the men and the munitions, it is solely a question of credit. The big debts and the heavy burdens of taxation for the future entailed by them are problems bearing on the future resources and productivity of the country. The creation of loans puts a mortgage on the future, with the aim of obtaining present means of payment for war supplies to be consumed to-day. The only real limit to these long-term credits is the ability to get present goods; when this fails, the object of borrowing disappears. For these prodigious loans subscribers pay in to the government forms of money, or mainly bank credits, based on the possession of goods or property (often in the shape of other investments). An equivalent destruction of goods in war-supplies has gone on *pari passu*. At the end of the war the credit obligations involve the return by the state of nearly all it has destroyed—but this can be taken, apart from the interest for carrying the burden of debt, only gradually during many decades from the production of the future.

§ 6. It had been supposed that the destruction in the European War would reduce the purchasing power of Europe and cut off the demand for American goods. As every one now knows, these fears at the outbreak of the war

Great debts
will not alone
end the war.

were unjustified, and there has arisen an unprecedented demand from belligerent countries for our foodstuffs, machinery, copper, horses, and all kinds of war supplies. While the demand for cotton, mainly from the Central Powers, has fallen off, yet the excess of our various exports has risen to undreamed-of figures. How can these goods be paid for? If not by actual gold, then payment must be made either by present goods, or—which is the important matter—by credit operations involving future goods. This last is the central matter.

In estimating the purchasing power of a country it must be treated as a going concern; that is, its output of products for general use and for export may be strikingly reduced in the years of war. But war conditions are, fortunately, not normal; and destruction, while unparalleled, must be relatively temporary. Therefore, the outlook in exceptional years of war must be corrected, for purposes of estimating the basis of credit, by reference to a country's normal productive power under average conditions. Thus the purchasing power of a nation by credit depends upon its long-established record in the past, its reputation for keeping its promises, the attitude of its people toward its governmental honor, its known thrift and industrial efficiency, its annual income, its taxable wealth, and its existing burden of debt. The ability of a state to fill up at once the losses of war now going on is—apart from its own internal productive resources—largely a question of its borrowing power, and the various influences affecting it. By getting loans a government may put off to the future, when conditions may be again normal, the process of making up its losses by industry and thrift. An enormous debt, of course, means heavy taxation; but, strange as it may seem, heavy

A country's credit depends on normal productive power.

taxes, if certain and skilfully laid, do not seriously retard industry and trade. Inequality and corruption in taxation do cause retardation.

It is sometimes explained that credit depends upon and is limited by money (especially that in bank reserves). This view, however, looks only at the external and purely

mechanical processes through which the fundamental sources of credit register themselves.

Surplus of goods larger than realized. The European War is forcing us to revise some traditional beliefs. One wonders that belligerents can keep up the struggle without either economic exhaustion or financial bankruptcy. If the inability to meet demand obligations in the usual gold of international payments is an evidence of bankruptcy, then several countries are already bankrupt. But how can they keep on? It is obviously a question, not of money, but solely of getting the goods needed in war. What is often overlooked is the phenomenal extent, in this modern era of new power and highly developed machinery, of the surplus of goods above the necessities of life. It is almost inconceivably large. As long as this prodigious surplus—or rather, the labor, capital, and resources by which this surplus is created—is not used up, a nation can go on fighting. Of course, in a case like that of Germany, the effect is that of practical confiscation of all surplus production to carry out a national purpose.

Even in such a case, cut off from outside borrowing, the usual forms are made use of; goods are taken by purchase or taxation; but the limit to consumption in war is the limit set by production. The ultimate limit to credit operations, even if confined to its own peoples, is goods, and not the various forms of money no matter how much they may be inflated. The disruption of war has shifted production away from civilian needs to the

war goods which disappear without replacement. That the total amount of goods formerly needed to supply men's wants has been lessened to an amazing extent is obvious. The people could not consume as much as before, even if they had more gold than before to buy with. The war goods are replaced only by obligations to return goods in the future; that is, by the engagements of the government to pay money which it expects to obtain by taxing the goods produced by the people for years and generations to come. These obligations may be the promises to pay of banks from which the government has obtained loans, or government notes, or short-term treasury notes, or long-term bonds bearing a rate of interest heightened by the risks induced by the chances of defeat in war. The state may try to expand the claims on future goods to its farthest possibility, but it will always be held up by an impassable barrier, when credits reach the limits of the surplus. Another way of saying the same thing is by estimating the annual increase of wealth, or net earnings above outlay. In Germany—to continue our illustration of a country cut off from outside borrowing—the net income is placed at about \$2,000,000,000. Already the total debt of Germany, including the enormous floating debts and those incurred by the separate states and municipalities, is over \$30,000,000,000, the annual charge on which at 5 per cent would itself eat up three-fourths of the net income of the country. It is a question whether the extreme limit of credit has not already been reached in this case. Certainly the lack of various supplies seems to show that the line of necessities has been nearly reached. It is quite another matter, on the contrary, for those belligerents who can obtain goods

Cannot pass
the limits of
the surplus
above
necessities.

Germany
nearing the
limit of
surplus
goods.

for present consumption by borrowing from other countries to any amount. They are limited only by the belief in their productive power after the war; by the ability to produce hereafter enough to meet the interest charge on the debt, and a surplus sufficient to provide for a steady growth of capital and a slow return to normal consumption.

§ 7. Although forms of credit rightly originate only from transactions in goods (including gold, money, and securities), all these operations are expressed in and are carried on through terms of money. By a curious reaction barter, whose inconveniences were removed by the introduction of money as a standard of prices and as a medium of exchange, has been in a sense restored through the introduction of credit, which allows goods to be exchanged against each other with the use of only a comparatively small quantity of actual money. Thus there has been a reversion to barter by the introduction of credit, but only after retaining in the mechanism of exchange all the advantages due to the use of money. While the gains from the price mechanism are retained, the effect of forms of credit is to reduce the reliance on money even as a medium of exchange. In Anglo-Saxon countries this development has gone on to a remarkable extent through banks and clearing-houses.

To some the habit of speaking, for convenience, of credit operations in terms of money may cloud the underlying, essential movement of goods and the associated problems of value. It may seem as if all credit operations were merely matters of money, and that credit is based on money and is directly affected by its quantity. Hence there have arisen in popular use expressions such as "banks lend money" or "the rate at the banks for money." In

Credit a
reversion to
barter.

reality these ways of speaking refer only to externals arising from the fundamental operations of credit. Banks lend only purchasing power expressed in money. Goods are primary; money is secondary in its function.

And yet it is supposed that credit, even in its enormous extension in modern times, must be constantly realizable in actual money; that if all credit transactions can be converted into money on demand, all is well; if it cannot, that "credit has broken down."

We know, too, that inability to pay in forms of money on demand is called "suspension,"

Immediate
redemption
of credit in
money.

or an evidence of bankruptcy requiring liquidation through some considerable lapse of time. In fact, as an evitable part of modern credit practice there has arisen the distinction between immediate redemption of credit forms in legal money on demand, and ultimate redemption, which requires time for sale and liquidation of assets not convertible into cash on demand. For all commercial banks which create demand liabilities for deposits or notes, inability to pay any claimant on presentation of a check, or its own notes, is regarded as an act of insolvency. Thus, on the face of things, credit seems to be maintained only by money, or bank reserves.

These, however, are only the outer evidences of underlying forces of credit, which are easily understood when analyzed. Governments and institutions of credit create demand obligations, and to meet them carry

cash reserves. But it is a commonplace to say that all these demand obligations could not possibly be paid in cash if all, or even a large part, of them were presented at once. In short, credit transactions in the main cannot be redeemed in money; and that truth implies nothing as to the unsoundness of these transactions. Not only can all legitimate credit dealings on demand not be paid

Not possible.

at call, but they are not in any real sense dependent on money. Although depositors in banks may count their funds there as available in money at any moment, every one knows that all or most of the depositors could not at one time get money even from the strongest banks. In fact, borrowers in these days do not get money as the result of a loan, but a right to draw a check which is acceptable payment for all their maturing debts. What borrowers need is not money, but a means of payment. The rate of discount which a borrower pays in getting a loan is not a charge for money, but for a means of payment available at once. Banks grant sound loans, based not upon money, but on the character of the assets offered as security. Firms manufacturing and selling staple goods on a large scale, borrow and pay off their loans from the proceeds of goods sold. The greater the quantity of staple goods produced and sold by a firm the greater the forms of credit likely to arise out of the movement of these goods; the greater the sum of paper or bills of exchange presented for discount; consequently, the greater the volume of loans granted by the banks, resulting in larger deposit accounts on which checks are drawn, and so in a larger volume of clearings. Loans are not made because reserves are large, but because good assets are offered. If good loans are thus offered, banks then see to it that reserves are up to the limit fixed by law or experience.

Obviously, credit institutions, such as banks, are engaged in the work of coining goods into means of payment, expressed in terms of money, to enormous amounts,

expecting the claims to money will not be called for, because they are simply devices by which goods thus coined can be exchanged against each other by offsets. The last thing a business firm wants is a large sum of idle money; it loses

Goods, not
money, the
end of
exchange.

as long as it holds it in its possession. Its purpose is to get goods sold and to obtain other goods in their place. This is the whole secret—if there is one—about credit operations being dependent on money. Bank reserves are kept nominally to secure immediate redemption of all demand liabilities. In truth, they are kept to secure confidence, in cases of alarm, a temporary rush to obtain cash, or doubt as to the soundness of the bank's assets. A panic, or a commercial crisis, is a name for an attempt to convert a large amount of demand claims into cash; and shows that it cannot be done.

Since commercial banks loan mainly on the paper arising from the production and movement of goods, they allow the borrower to draw on them on demand, while they await the outcome of the operation in goods. In fact, banks practically insure the success of the undertaking. Having already granted present means of payment to the borrower, they suffer loss if the transaction fails of success, and does not yield the proceeds sufficient to repay the loan. The liquidity of credit forms is constantly being tested by being paid off in terms of money when due; yet even then the repayment of the loan is not accomplished by returning actual money in hand, but usually by a check on an account probably itself the result of coining goods into means of payment in another bank. By making only short-term loans, and thus frequently testing the solvency of the basic transaction in goods, the whole body of credit is renewed and kept healthy.

How credit
is tested.

The appearance of a dependence of credit on money is seemingly supported by the fact that heavy imports of gold strengthens bank reserves and allows a very great expansion of loans. If it be that good paper, based on sound assets, is offered to an extent that demand liabil-

ities are out of legal proportion to cash reserves, then the new gold helps to carry more loans; but even here the logical order of events is: first, transactions of a sound character in goods, then loans, and subsequently the accumulation of a proper reserve. On the other hand, merely because of large gold imports, and large bank reserves, an increase of loans without regard to safe transactions in goods would be a mere inflation of unsound credit. This principle will explain the fear that, due to an excess of American exports and heavy imports of gold from England during the war, our credit was in danger of inflation.¹ The prevention of this danger lies in constant and critical scrutiny of the character of the transactions behind the paper offered for discount, and in paying no heed to the excess reserves. Then, if gold is in supply beyond the needs of the country, or for bank reserves, it would be exported just as we would export an excess of grain.

The effect of the outbreak of the European War was particularly marked because the belligerents had been exporting and importing goods to each other on a very large scale, and consequently the settlement of the debits and credits arising from this enormous total was suddenly arrested. Thus there were no basic means of payment forthcoming to take up the forms of credit, drawn in terms of money payable at certain dates. This was the critical situation caused by the stoppage of trade when the war began. For those who are not paid by their debtors is there any recourse but insolvency? They have hundreds of millions of demand liabilities falling due day by day, for which actual money can be demanded. If not able to pay in cash, because they cannot collect, can they offer

Bank
reserves and
inflation.

No
breakdown
of credit.

¹ See Chap. VI, § 7.

an acceptable means of payment? Here we find the crux of the whole crisis in credit brought on by the war. It was spoken of as "a breakdown of the machinery of credit." This is not an accurate statement. It was a subtraction of the goods on the movement of which credit forms had arisen. The machinery of credit continued to exist. For the need of the hour a means of payment was devised through the mechanism of credit. In the case of England, a loan by an institution of credit (whose basis by the authority of the state was the goods of the whole nation) was the one thing needed. The grant of a loan gave the right to draw on a deposit account at the Bank of England; and thus a means of payment was created by which debts could be met at maturity. The assets lying behind the credit operations may not all turn out to be sound after the war; if they do not yield proceeds sufficient to take up the loans sooner or later, the amount will be made up by the state through a charge upon the public debt. The solution of the unexampled crisis produced by the outbreak of war was thus found in the workings of credit. It was not a need of money for circulation in the hands of the public. Yet in Germany the remedy was supposed to be almost entirely that of an issue of forms of money. To the discussion of these policies are we led by the very nature of credit.

§ 8. In spite of the evident truth of the statement that credit is based on goods, and rises or falls with the volume of transactions in goods, why is it believed by some that credit is directly dependent upon and limited by money? Indeed, as looking in the same direction, it is supposed (even by men as high placed as Lloyd-George) that a credit emergency can be relieved only by additions to the paper money of a country.

It is observed by every one that, in a crisis, the inability to meet a maturing obligation by money, or some acceptable means of payment such as checks on solvent banks, is a mark of insolvency. There is an assumption, however, that payment must be made in money, or legal tender, and that bank loans are directly limited by the amount of cash in the reserves. Such an impression, however, arises from considering only the superficial phases of credit operations. In the main it is due to a juridical reason. Contracts and credit obligations are necessarily drawn in terms of money, because goods are valued and exchangeable only when priced in some monetary standard. The enforcement of notes, bills, and credit forms must be in something definite, capable of legal definition. Therefore, all the enormous volume of transactions in goods which underlie credit forms and obligations must at some instant—not all at once—pass into its equivalent in a common denominator of value, so that goods can be offset or exchanged against each other definitely and expeditiously. Expressed in terms of money and thus offset, it does not follow that enormous dealings in goods are actually settled in money; even balances can be carried forward and thus make no call for money. In very truth, while goods by the millions are thus being exchanged in the markets, there is no demand thereby on bank reserves; for reserves are needed mainly for exportation, or to adjust daily balances (quickly rectified), or to quiet fears as to the conditions of business or solvency in a great emergency. When goods are moving normally and trade is brisk there is little demand for cash. As already explained, banks by loans coin staple goods into means of payment, which are thus exchange-

Even though credit obligations are drawn in terms of money, money does not necessarily pass.

able against each other in terms of money, through the use of checks drawn on deposit accounts arising from the loans. Such means of payment have largely superseded the actual passage of money in Anglo-Saxon countries. For the rest, even in a suit for the collection of a debt in legal tender, the final payment is almost certain to be paid to the court in a certified check; because that would be an acceptable means of payment to any one in the community.

When the United States obtained a loan of \$250,000,000 in April, 1917, the banks made payment to the Federal Reserve Bank of New York by checks for their subscriptions on a certain day; and on the same day the secretary of the Treasury handed over a check for \$200,000,000 to the British representative (as a loan to Great Britain), which was deposited by its agent in the Federal Reserve Bank of New York to the credit of the British Government. To make payment for purchases in this country, the British official gave a check for \$200,000,000 to its agent (J. P. Morgan & Co.), who presented it at the counter of the New York Federal Reserve Bank, and in return obtained twenty cashier checks for \$10,000,000 each. These were deposited by J. P. Morgan & Co. at various banks, which passed them into the clearing-house as offsets for claims against them, on the same morning that the Federal Reserve Bank passed into the clearing-house the checks it had received in payment of the loan of 3 per cent treasury certificates the day before. Thus practically no cash reserves of the banks were disturbed by so large a transaction actually calling for the payment of hundreds of millions of money.

Case of
British loan.

There is thus no antagonism, if we fully analyze that which is really essential to credit operations, between the

truth that credit is based on goods, and the obvious fact that all credit operations are payable in money. If actual money were demanded for all these credit obligations

drawn in terms of money at any one moment, it could not possibly be paid. And yet there is no danger in such a situation if the credit is really based on sound transactions in goods.

Bank
reserves
do not
necessarily
limit loans.

If the goods are salable at normal prices, the credit obligations are effectively liquidated at maturity by a satisfactory means of payment (although not actual cash). It is, however, a hard saying to some that bank reserves do not necessarily limit loans; for it is noted that reserves must bear a certain proportion to demand liabilities, and that if reserves are down to the legal limit, additional loans are interdicted. Here again the superficial and mechanical phases of credit are focussed upon without regard to what is more essential. If there is a legal or customary reserve required, of course it must be supplied. If good loans are offered to a bank, in any normal situation, it takes them and then sets to work to obtain the required reserve. If it has good assets it can get gold—and of recent years it has been emphasized that gold has become overabundant. Thus there is no limit to reserves but the supply of gold. What really happens, in practice, is that the strength and solvency of a bank are determined not by the amount of its cash reserves, but by the character and liquidity of the assets it carries in its loan items. In the recent reform of the American credit organization, which led to the establishment of the Federal Reserve Banks, that truth came to be regarded as basic. If assets are liquid, an increase of reserves and a means of payment are quickly available.

In international trade, moreover, the same general principles are at work. The exports and imports of goods

which form the basis of international credit are also supplemented in the financial account, by the movement of securities, claims for carrying freight, travellers' letters and the like. All these credit transactions are offset against each other—and a balance paid in gold only when the account cannot be carried forward. When a European war of the present character interrupts not only the movements of goods, but also of securities, the very foundations of credit are removed, although the obligations to pay in terms of money remain. At once the attempt to call in actual gold, the international money, shows that actual money cannot be had in sufficient amounts. This produces a situation usually known as a "breakdown of credit." The disaster is due not to any deficiency of money, or gold, but to the breakdown of the normal movement of goods (and titles to goods and services) on the basis of which a means of payment might be created through credit operations. The machinery of credit still exists, through which sooner or later payments may be made as soon as goods begin to move again.

Breakdown in
international
movement
of goods.

CHAPTER III

ENGLISH CREDIT OPERATIONS

Credit organization—Acceptances—Discount houses—Joint-stock banks—Bank of England—Wealth and income—Chronology—Stock exchange—First shock to acceptance houses—Joint-stock banks demoralized—War and credit—Moratorium—Suspension of Bank Act—Bank to the rescue—Currency notes—Remedy in credit, not in more money—Gold standard—Dislocation of trade—War and capital—Workings of credit—Inflation—Prices—Foreign exchanges—Factors affecting price of exchange—Return of American securities—Credits abroad—Gold shipments—Neutral exchanges—Government borrowings—Taxation and loans—Forms of debt used—War loans—Ability to carry the burden.

§ 1. While the principles and fundamental truths of credit at work in all countries are essentially the same, yet, because the growth of legal and monetary customs has been very different among different peoples, the mechanism through which the same forces work may be very different. This will appear as we present the credit operations of the leading belligerents in the extraordinary conditions produced by the outbreak of the European War. We shall then have an exceptional opportunity to make a comparative study of the workings of different systems under a great and unequalled strain arising from the same cause.

Comparative
study of
different
systems of
credit.

In Great Britain the credit organization is formed of accepting houses, discount houses, and large joint-stock banks—topped off by the Bank of England.

While a note promising to pay at a certain time in the

future is the usual form of credit employed in this country, in Europe it is a bill of exchange drawn by a seller of goods on the buyer, asking him to pay the amount at a definite time in the future. If **Acceptances.** the buyer accepts the demand made upon him in the bill by writing across the face of it "accepted," with the date and his signature, it becomes a legal claim against both parties to the transaction, and thus the best two-name commercial paper. Acceptances may also arise in other ways. If persons, or commission houses, of good standing need funds, for instance, to buy cotton, they may arrange with banks or acceptance houses (established for this single purpose) to let the buyer draw a bill on them, falling due at a future date, and have them accept it; so that the accepted bill is now an obligation of the accepting house; and a form of paper called an "acceptance" is created which is discountable wherever those firms are known; that is, in London, Hamburg, Paris, and every European centre.

But in practice this form of credit works out in a different manner from our promissory note. In the latter case the bank at once grants the borrower a right to draw on demand, and buys a right to a sum of money in the future. In the case of an acceptance, the accepting house does not create a liability to pay money at once on demand, nor does it advance any capital. It might seem as if this basis of credit were unsubstantial. But in fact the accepting house is protected by an asset in the form of an engagement by the maker of the bill to provide funds to take up the bill at maturity. The acceptor takes only the risk that the drawer of the bill will, or will not, pay off the bill before it falls due. The acceptor sells his credit to the maker of the bill, or borrower, thus giving

Accepting
creates no
demand
liability.

the paper a market value as an obligation of a widely known institution of credit. The accepting house, therefore, creates no demand liability against which it must necessarily hold cash reserves; for the house cannot be called on for payment until the bill falls due, and in the normal course of events the maker of the bill will secure the acceptor against loss by depositing funds before the date of maturity.

Being a great reservoir of active capital, and having transactions in goods or securities with all parts of the world, London had accepting houses and banks on whom bills, based on these transactions, had been drawn to enormous amounts. In normal times the proceeds from sales of goods day by day took up the maturing bills, and cash was little used. If, however, anything should happen to stay the movement of goods or securities, then the basis of credit would be weakened and a means of payment would be unavailable to those having acceptances falling due in the near future.

Originally the bill-broker, as now with us, was only an intermediary between the maker of a bill and the buyer of it, receiving a commission for making the sale. Out of this function, however, the English bill-broker has been evolved into the owner of a small capital, who himself buys the bills; but he still counts on disposing of the bills to banks who make advances on them to the bill-broker at call. Hence the banks regard these loans as quick assets.

The discount house is an evolution one step further. It has a larger capital than the bill-broker. It does much the same kind of business, but is itself a permanent holder of bills until maturity, and receives deposits on which it allows interest. Like any bank, it discounts bills of exchange, and in doing so

No reserves
required.

Bill-brokers.

Discount
houses.

creates demand liabilities. Its assets are made up of current bills maturing at short terms as the basis of loans; and these bills arising from buying of goods are expected to be taken up by borrowers on the sale of the goods. Inasmuch as it may be called upon by borrowers at any moment for the funds loaned, the discount house puts itself in funds by short-time loans, or loans on call, from the joint-stock banks. Thus the various parts of the credit organization are dovetailed together, and rest ultimately on the soundness of the transactions in goods.

The joint-stock banks all together play a very important rôle in the operations of English credit. The capital and resources of some of these banks, like Lloyds (with a capital of over \$40,000,000 and deposits of \$535,000,000), are the largest of any private institutions in the world. They lend to the acceptance houses, to the discount houses, to foreign commercial houses, and in making advances on securities as collateral they carry a great volume of stock-exchange paper. In theory the joint-stock banks do not directly lend abroad, but in fact they lend to acceptance houses which are constantly guaranteeing the transactions of foreigners by accepting their bills and so help on the carrying of foreign operations. Hence, a large volume of the paper held by these banks—apart from that based on domestic trade—has originated outside the kingdom. The dealings from which the forms of credit have come into existence were spread all over the commercial world, such as cotton shipped from Mobile, coffee from San Paulo, wheat from Buenos Ayres, nitrate from Chile, wool from the River Plate, tea from Ceylon, or silk from Japan. Thus a bill drawn in English sterling on London was used as a recognized means of payment in every part of the world; it flowed back to London for settlement as a matter of course;

Large
joint-stock
banks.

and London had long been accepted as the credit centre of the world. So true was it that bills on London had become the customary means of foreign payment that Germans, in their efforts to absorb the trade in South America, or elsewhere, found it advisable to establish branches of their international banks in London in order to share in dealings with paper inevitably drawn on that centre. Moreover, many foreign individuals, or firms, leave their

English credit
runs
throughout
the world.

balances on call in Anglo-foreign banks, or foreign agencies of British banks, throughout the world; and in due course these funds are usually invested in foreign bills. Thus it has happened that English credit has been founded on transactions in goods in every part of the globe. It has been estimated that one-half of the world's foreign trade was financed by English credit. If an American wished to pay Brazil he would buy a bill on London and send it to meet his obligation. Consequently, any upheaval which would interrupt the movement of goods in international trade, or prevent the bills from being paid at maturity, would solidify all the credits centring on London. For it is a banking truism that the ability of any credit institution to meet its demand obligations, whether circulating notes or deposits, depends upon the liquidity of the assets behind them; and this liquidity depends on the free sale and interchange of staple goods.

At the head of the organization of credit stands the Bank of England, a banker's bank, the ultimate protection to the British credit system in all great emergencies. Bill-brokers

Bank of
England.

bring to it for discount bills which cannot be taken care of by "the street," so that the bank rate differs by being usually higher than the rate in the ordinary market for loans. The issue department of the Bank takes sole care of note-issues by an auto-

matic arrangement through which all notes above £18,450,000 (as now standing) are covered pound for pound by gold. Gold can be had by presenting notes, or *vice versa*. The credit operations of the country centre in the banking department, which is quite distinct from the issue department. It is the reserve of the banking department, and its relation to the private demand-deposit liability (known as "other deposits" in the accounts) which is pivotal for the rate of discount and the ease of credit.

It is a mistake to suppose the reserves of the bank are kept in gold; on the contrary, they are mainly composed of the bank's own notes. This might seem startling were it not kept in mind that the notes are redeemable in gold on demand at the issue department, whose resources and operations are as definitely separated by law from the control of the banking department as if it were an independent institution. Therefore, the rise and fall of the banking reserves of the bank have nothing whatever to do with the integrity and maintenance of the gold standard in Great Britain. Moreover, it is only through the banking department that an expansion of credit can take place and practically without any change in the quantity of note-issues. Indeed, the one great lesson in the history of the Bank since 1844, when the issue was completely separated from the banking function, is that an expansion or contraction of credit, in its connection with prosperity or depression of trade, can go on independently of the amount of note-issues. The banking operations are directly responsive to the country's transactions in goods and securities. Incoming gold, if needed for reserves as loans rise, usually appears in the form of notes issued on the deposit of gold in the issue department.

**Bank
reserves not
in gold.**

**Expansion of
credit only
through the
banking
department.**

§ 2. The far-flung lines of British credit were due to extensive investments of capital in all parts of the world, even outside her own colonies and dependencies. These productive operations, together with shipping and railways, set in motion a great volume of goods between other countries and Great Britain, and accordingly led to the creation of large credit institutions to provide the means for settling these international dealings. The colonial and foreign banks in London, with branches in all important ports, have been long established, because, as explained, Great Britain was the earliest to develop the new era of machinery and power and supply other countries with cheap goods. In this respect she was fifty years ahead of Germany.

About the middle of the nineteenth century England had invested her capital in German tramways, gas-works, water-works, cotton-mills, and the like. She sold the Germans manufactured goods, and got back corn, wool, and cattle. While these conditions have now entirely changed as regards Germany, the work of supplying capital for the development of new countries has gone on briskly in many parts of the world. It is estimated that British capital was flowing abroad just before the war at the rate of about \$800,000,000 annually. The effect of this flow for many decades had given British foreign trade and credit an unequalled pre-eminence, so that one is not surprised to have the sum of British investments abroad estimated at \$20,000,000,000. Consequently, London was owed by all the world. In particular, the United States, Argentine, Brazil, Chile, China, Japan, Canada, Australia, India, South Africa, the Straits Settlements, and the west coast of Africa were directly dependent on England for capital, and their economic development had been largely sup-

Foreign
banks in
London.

British
investments
abroad.

ported by it in the past. As a consequence, sums were due to England for freights, interest on foreign investments, and the like, to such an extent that British imports normally exceeded her exports in order to cover the balance due her. British imports in 1912 were \$3,164,510,000 as against exports of \$2,436,115,000. In brief, England in the international accounting was a creditor nation on a vast scale, and she could call in gold at will for the support of her institutions of credit whenever it was needed to aid in creating additional means of payment for exchanging goods. No country in the world was in a situation in which war and an upheaval of international trade, interrupting the daily liquidation of credit, would be more destructive to her self-interest.

Moreover, English trade with Germany and her North Sea neighbors was large. One-fourth of the whole trade of Great Britain was going on through the North Sea and the Baltic. English exports to Germany alone amounted to over \$300,000,000, with imports from there of over \$250,000,000. Between the whole British Empire and Germany the total direct trade had risen to over \$800,000,000. British exports to Germany alone were more than the combined exports to France and Italy; nearly equal to all the exports to Sweden, Norway, Denmark, Netherlands, and Belgium combined; a little more than those to the United States; and more than twice as much as those to Russia. As offsets, she imported from, more than she exported to, France, the United States, Sweden, Norway, Denmark, Netherlands, and Belgium. The corresponding movement of credit instruments based on goods—especially if those based on loans, securities, freights, etc., be added—make up an impressive total, which, through the foreign exchanges, obviate the sending of gold except for occasional balances.

British
exports and
imports.

Beyond these obligations, domestic and foreign, the total national wealth included non-bankable property. Giffen put the wealth of the United Kingdom in

	1912 at \$82,500,000,000, with an income of
Wealth and income.	\$10,600,000,000; and for the whole British

	Empire respectively at \$125,000,000,000 and
	\$17,000,000,000. The income of the United Kingdom
	alone from foreign investments was placed at \$950,000,-
	000, and from shipping at \$650,000,000.

§ 3. There was something dramatic in the suddenness and force with which the blow at the end of July, 1914, fell upon the credit centre of the world. Nothing

	in the whole history of British experience
English un-	has equalled, or even nearly approached,
preparedness.	the extraordinary complications in money,

credit, and public finance caused by the outbreak of the European War. A few weeks before, not only was the possibility of what actually happened regarded as almost unthinkable, but no preparation whatever had been made to meet it. Looked at impersonally, merely from the point of view of credit, the condition of unpreparedness constitutes the most convincing evidence of the lack of any intention on the part of England to bring on the war. The absence of a field force to send to the Continent was no more conspicuous than the want of all preparation for such a struggle in the domain of credit and finance.

The Balkan situation, somewhat as a register of the chances of a European war, had long created a sensitive state of mind on the stock exchanges of the world; but, outside of inner circles in Berlin and Vienna, it was not believed that a crisis was imminent. As the Italian foreign minister later disclosed, Germany and Austria had

intended to force the issue in 1913, but Italy refused to join her (then) allies in an offensive war. The looked-for opportunity, however, was created by the murder of the Austrian heir-apparent at Sarajevo, June 28, 1914.

The crisis first showed itself in the markets for securities, as may be seen in the following brief chronology:

- 1914—June 28. Assassination of Archduke Francis Ferdinand and his consort at Sarajevo.
- July 5. Council of war in Berlin.
- July 13. Vienna: a fall in stocks of 10 to 12 per cent.
- July 20. Vienna: a further break in stocks. Semi-official declaration in Vienna that "Germany stands on the side of Austria-Hungary; that the Serbian crisis must be cleared up in accordance with the demands of Austria-Hungary; and that it hopes the contest will be localized."
- July 22. Austria-Hungary's ultimatum to Serbia demanding an answer by Saturday evening, July 25.
- July 23. Berlin: bourse panicky. Great fall in securities.
Paris: stock exchange in panic.
- July 25. Russia announces she will protect Serbia.
New York: heavy selling of securities by foreigners.
Berlin: securities fall 6 to 20 per cent.
- July 27. Vienna: stock exchange closed; also in Budapest, Brussels, and Antwerp.
- July 28. War declared against Serbia by Austria-Hungary.
Bourses at Montreal, Toronto, and Madrid closed.
- July 29. Russia mobilizes.
Berlin: quotations discontinued.

- July 30. Panic conditions in London.
Bourses at St. Petersburg and in all South American countries closed.
Paris: coulisse closed.
- July 31. Paris: transactions on Parquet suspended.
London: stock exchange closed.
New York: stock exchange closed. (Last quotations on July 30.)
German ultimatum to France; 12 hours to reply.
- August 1. Germany declares war on Russia, and invades Luxembourg.
French mobilize.
- August 3. Germany demands passage through Belgium; refused.
- August 4. German troops enter Belgium.
English mobilize.
11:00 P. M. England declares war on Germany.

To July 22 the conditions of credit in London had remained normal. This city, however, being an international market for securities of all countries, would be directly affected by any inability of foreigners to remit in settlement of stock-exchange accounts. The selling of stocks and the evident liquidation in all financial centres precipitated the crisis. In London it was due to the failure of foreign debtors to meet their engagements. Derenberg & Co., who carried German accounts, not receiving remittances, failed July 30; and others must have followed for the same reason. The so-called breakdown of the foreign exchanges meant that firms were unable to remit to London, because they could no longer convert their assets into an international means of payment. The only exchanges open on July 30 were those of London, New York, and the Paris Parquet.

Selling of
stocks.

To prevent failures, if sudden liquidation were forced, the last stock exchanges were closed¹ early on July 31, 1914. A London house, carrying a stock account for a client on the Continent for purchases previous to the war, would realize that the closing of European exchanges, the moratorium, and the postponement of the Paris settlement had locked up all his client's funds. Sums due from abroad were now unavailable.

Stock
exchanges
closed.

The London joint-stock banks, it will be recalled, carried very large stock-exchange accounts, supported by customers' margins based on the prices of securities. If the stock exchange remained open, and the panic forced realizing sales at constantly lower prices, the resulting official quotations would have obliged the banks to call for larger margins, and would have brought on many failures. In fact, these banks made the error in this emergency not only of calling in loans but also of being reluctant to lend—which could only aggravate the situation. It is estimated that loans to the stock exchange amounted to \$460,000,000, of which \$385,000,000 were well covered. If such large sums were called in by the banks, the repayment would cause many and serious failures among their customers. Therefore, the government arranged with the Bank of England to advance to lenders on stock-exchange loans outstanding on July 29, 1914, at the prices of that day, 60 per cent of the value of the securities held.²

¹ The London Stock Exchange was opened again January 4, 1915. The settlement for July was carried forward to November 18. During the closure of the exchange stocks were sold by negotiation and at minimum prices fixed by a committee.

² The loans at a minimum of 5 per cent would not be pressed for repayment till twelve months after peace, or till the expiry of the Courts (Emergency Powers) Act of August 31, 1914. *The Bankers Magazine* reprints the official terms, December, 1914, pp. 702-704.

The storm centre in the week of panic beginning July 30, however, is to be found in the situation of the acceptance houses. They, as already explained, by accepting foreign bills and discounting these with the discount houses and joint-stock banks, became guarantors of the payment of the bills at maturity. It became suddenly evident, however, that the drawers of these foreign bills could not remit funds on a very large scale to meet them when due. If the drawers could not pay, the acceptance houses could not; if the acceptance houses could not pay, then these bills which formed assets in the discount houses and banks were frozen. It is estimated that the sum total of bills involved amounted to about \$1,750,000,000; of these the banks held from \$500,000,000 to \$625,000,000, constituting perhaps 15 per cent of their assets. Three discount houses (having a capital and surplus of \$18,000,000) had discounted on June 30 bills to the total of \$291,000,000. Since the discount houses carried bills through call loans from the banks, they also could not repay the banks. Moreover, the main deposits of the business public in London were in the joint-stock banks. The inability of foreigners to remit a means of payment through the acceptance houses thus virtually held up the power of the London banks to pay their own customers on demand; and yet their assets were supposed to be about \$5,000,000,000.

The crisis was not due to a locking up of money. Indeed, there was no run on the banks by the public. To meet the obligations of foreigners in the past the proceeds of goods and securities had been coined into a means of payment by institutions of credit. Now what had happened? The sending of goods was suddenly stopped, and also the shipment

The blow first
fell on the
accepting
houses.

Credit in
abeyance.

of gold from most countries. The closure of the stock exchanges made it impossible to realize on securities, while new supporting loans could not be had from acceptance and discount houses whose lending power had been practically reduced to nil. In brief, the transactions in goods, securities, and the like, from which forms of credit arose, had stopped.

In the midst of this critical situation the joint-stock banks, unfortunately not rising to the emergency, showed the white feather. In any such state of affairs it is the first duty of a bank to lend—and then to lend, in order to save its own customers and thereby preserve the quality of its own assets. Its main function is to allay panic and restore confidence. What did the banks do? On Thursday, July 29, the day of payment on the stock exchange, the banks were over-strict in scrutinizing loans. Also, from the 29th to the 31st they began calling funds advanced to bill-brokers and the discount houses, so that the latter were forced to carry enormous amounts of bills to the Bank of England for discount. It was their pressure and that of bill-brokers for aid which forced up the rate at the Bank to 8 per cent on Friday, and finally to 10 per cent on Saturday (August 1). As if in trouble, the banks began to draw notes and gold from their accounts at the Bank of England. In addition, they treated the public in a way to excite alarm where there had previously been no panic. Customers, coming for cash to use on the coming holiday, were surprised at getting only 10 per cent in gold, and 90 per cent in notes of the Bank of England. There being no bank-notes in denomination below £5, the public needing smaller coins were driven to present notes for redemption in gold to the issue department of the bank, where a long queue began to form. As if this were not bad

Joint-stock
banks
demoralized.

enough, some of the banks tried to force a policy of suspension of specie payments on the Bank of England. Evidently, most of the joint-stock banks had lost their heads.

Not so the Bank of England, which preserved the best traditions of English banking experience by lending freely to the bill-brokers. With courage and good judgment it took up the burden thrown upon it by the questionable policy of the private banks, not only in these first days of panic, but in all the later period. It steadied the market and prevented loss of confidence.

Bank of
England rose
to the
situation.

It happened that Monday, August 3, was a regular bank holiday. The government and the Bank proclaimed three extra bank holidays, so that no banks were open for business from Saturday, August 1, until Friday morning, August 7. This gave time for the authorities to prepare remedial measures. When the banks opened on Friday there was no excitement on the part of the public and no rush to withdraw funds. By August 7 the Bank had lost \$73,050,000 in gold to the Continent, to the banks, and to the internal circulation, while the new loans showed in the rise of "other securities" by \$68,250,000. After August 7 the exports of gold ceased.

The effect of war upon credit was unmistakable. Its ultimate basis, as we have already seen, is the supply of future goods and services which are constantly emerging from productive sources and which can be relied on to be sold in the markets in a short time. It is assumed that securities—which are titles to parts of some productive enterprises and whose value in the market depends on their productive power, or earnings—will be freed from any interruption to the certainty of normal production and exchange of goods. But war has a direct effect upon credit when it

Effect of war
on credit.

strikes at the certainty of the production and exchange of goods; it makes it uncertain that goods, if produced, will reach the market. When it is said that war shakes the foundations of confidence, it is meant that the expectations of coming goods cannot be depended on. That is why credit is restricted. For, if goods cannot come forward as expected, their proceeds from sale in the markets cease to be a means of payment for maturing credit obligations. Nor will credit be granted in times of uncertainty as freely as formerly, and the want of credit reacts upon and slows up the processes of production. Moreover, uncertainty and disturbance of production cause violent changes in the prices of commodities, and so in the basis on which credit is given.¹

It was the working of these fundamental principles behind the occurrences of the time which produced the difficult situation in English credit, sometimes spoken of as the immobility of credit. Obligations had been entered into for payments on definite dates, but the means of payment had been subtracted.²

§ 4. The means adopted to meet the greatest shock in all history to the credit system of the world's financial centre become of paramount interest to every student of the war. Nor in so great an emergency was it to be expected that no mistakes would be made.

As must be now clear, the centre of difficulty lay in

¹ Cf. A. H. Gibson in Kirkaldy's *Credit Industry and the War*, 1914, pp. 202-204.

² A. H. Gibson, *ibid.*, p. 204, cites four causes for this immobility of credit:

1. Borrowers on call had transferred their funds to others in anticipation of future sales of goods, and they feared a call for a return of the loan when their funds were locked up.

2. The actual calling in of demand loans by the banks.

3. If payment in legal-tender money were insisted on by the lender in this exigency, there was a fear that there was not enough to go around.

4. The inability of foreign clients to remit to meet maturing bills because of the disarrangement of the exchanges due to war conditions.

the breakdown of the acceptance houses and in their unliquid bills. On August 2, for the first time in Eng-

lish experience, a moratorium for one month, applying to bills of exchange accepted before

The
moratorium.

August 4 (if reaccepted), was proclaimed.¹

On August 6 another proclamation extended the moratorium to all negotiable instruments until September 4.

While making certain exceptions, such, for instance, as a bank-note, the moratorium in fact protected the joint-stock banks against the demands of their depositors. It is a serious question whether a moratorium was really necessary in order to save the acceptance houses. If their bills were, in reality, soon made liquid by the action of the Bank of England, as we shall see, why was a resort made to a moratorium, a very desperate last resource? The needed solvent, used in all similar contingencies in the past, has been not a postponement of debts, not the increase of actual money, but the creation of a means of payment by a loan at an institution of credit which would in another way afford the borrower time for adjustment; and this means was what actually met the emergency in the end. Relief depended on the lending power of a bank, and in this case it was the Bank of England.

Although this end was not definitely accomplished until later, one step was taken in this direction on August 6. Nor, as is sometimes mistakenly assumed, was the quality of its service related to the issue of more money. I refer to the suspension of that part of the Bank Act

¹ This proclamation was legalized, August 3, by the Postponement of Payments Act, which included all negotiable instruments (4 and 5, George V). Apart from an amendatory proclamation, August 12, that of September 4 extended the moratorium to October 4. It was again on September 30 extended to two months and fourteen days, making Monday, October 19, the first due date (if the bills matured between August 3 and September 3).

The various Moratorium Acts in detail are given by Hartley Withers, *War and Lombard Street*, Appendix I, pp. 133-147.

which requires all notes put out by the issue department above a certain strata (now £18,450,000) covered by government bonds to be protected pound for pound by gold. In former suspensions of this provision of the Act, the banking department has taken government securities from its assets to the issue department and obtained notes for them, which were at once placed in its reserves, thereby announcing its ability to increase its banking reserves at will, and to meet all demands for loans. In the past the Bank had first obtained the promise of the premier to introduce a bill of indemnity for the violation of the Act. The whole point of the suspension lies in the enlargement of the reserves of the Bank, not in a demand by the public for more notes to be placed in general circulation. As soon as the suspension is announced, it is recognized by all who need loans that the Bank is no longer limited in lending by the danger of falling reserves; hence the immediate allaying of all haste in trying to get loans for future emergencies, and the subsidence of panic fears. Very few, if any, of the new notes secured by consols (instead of gold) go into circulation. The panic is allayed, not because money as a medium of exchange has been increased, but because a loan can be had bringing with it a deposit account at the Bank, thus providing an acceptable means of payment through a credit operation. The check transfers effectively the means of payment without the need of more money, through what may be called the deposit-currency.

Purpose of a
suspension of
the Bank Act.

On August 6 the Bank Act was suspended—permitting all needed issues of bank-notes—and the bank was thus ready to adjust its reserves to any pressure for loans. In actual practice, between July 22 and September 2 the increase of Bank of England notes was only \$42,500,000;

and this gain was not made under the suspension of the Act, but by a deposit of gold for each new note issued over £18,450,000. In short, practically no use was made of this suspension of the Act. That is, the crisis in credit did not require the issues of notes. The supposed demand for more legal-tender currency, caused by fear of hoarding, or for notes to go into general circulation (not for reserves of the banking department of the Bank of England), could have been met under the suspension without resort to the dangerous issue of government paper. An amendment allowing bank-notes of £1 and 10 shillings would have made the Currency Act unnecessary.¹ But, at the same time, a long-established tradition was abandoned by the passage of the Currency and Bank Notes Act of that date, when the suspension of the Bank Act was left in the future to the discretion of the Bank and the Treasury, without the need of a promised indemnity from Parliament.²

We are now face to face with the central problem of the whole credit situation. How could the great mass of unliquid bills and acceptances be taken off the market, so that the machinery of credit could be again set in motion?

When the banks reopened August 7 the bank rate was reduced to 6 per cent, and on the next day to 5 per cent (the usual pre-panic rate having been 3 per cent); but there was little demand for loans, and there was no business in foreign exchange. The moratorium had postponed the failure of the acceptance houses until at least October 19; but this left the status of the bills coming due in the fu-

Suspension
in 1914.

Aid to the
acceptance
houses by
the bank.

¹ Cf. p. 95.

² See *infra*, Section 3, Currency and Bank Notes Act, 1914, Appendix I.

ture uncertain and so unmarketable; and failures would be inevitable unless postponement were made until foreign debtors should be able to remit to London. Under these circumstances no new bills could be accepted, and normal operations could not be resumed. The future solvency of the acceptance houses being uncertain, their credit was poor, and acceptances had no market. The Gordian knot was cut by the Bank, followed by the bold policy of the Treasury. On August 13 the Bank agreed to discount all approved bills of exchange¹ accepted before August 4, without recourse to the holder, and if unpaid at maturity the acceptor could further postpone payment to the Bank, interest being charged at 2 per cent above the varying bank rate. Thus the acceptance houses were provided with funds to pay off at maturity all their acceptances, and the assets of this character in the discount houses and joint-stock banks were at once made liquid. The obligation between the drawer of the bill and the acceptor remained in force. The acceptors were expected to collect from clients as soon as possible, and use the funds to repay the bank; but acceptors might have until one year after the close of the war to repay amounts not recovered from their clients.² In order to encourage new business, new acceptances were to rank ahead of the claims of the Bank.

Obviously the emergencies of war, the destruction of wealth, the changes in trade and connections, would not leave all drawers of pre-moratorium bills in condition to

¹ Including such bills as are customarily discounted, and good trade bills, and the acceptances of such foreign and colonial firms and bank agencies as are established in Great Britain. As to recourse, cf. H. Withers, *War and Lombard Street*, p. 66.

² It follows that if drawers were completely ruined by the war, the bank, after one year from the end of the war, would still have a claim against the acceptor for unrecovered payments. In effect, the acceptance houses could not hold as good a position in the future, with this liability held over them.

repay eventually all their obligations which had been discounted by the Bank of England for acceptors. Great

**Government
relieves the
bank from
loss.**

losses must be expected by the Bank. The bold and unprecedented step was then taken by the government of guaranteeing the Bank against such future losses by agreeing to charge them up to the public debt. The possible losses to the state are estimated at not over \$150,000,000, and may be much less.

By this credit operation of the Bank the heavy load of maturing bills which had stopped all business was lifted, and bills not yet matured had been discounted so as to

**Effect on the
bank-
accounts.**

put the banks in possession of large sums to their credit at the Bank of England. The cessation in the movement of goods or securities,

the abandonment of new enterprises, the restriction on general business, and a general caution, resulted in very few new bills being offered. Of course there were no new loans on securities while the stock exchanges were closed. Hence the call rate was very low, and loans were easy. The effect of this extension of credit can be seen in the accounts of the Bank (see Chart II). The discounts ("other securities") by September 2, in comparison with normal, had trebled; and private deposits ("other deposits") had gone even higher. The extent of the burden laid on the Bank to relieve the crisis by new discounts, comparing July 22 with September 2, was about \$440,000,000.

By the end of August the immediate needs created by the outbreak of war were cared for. There was no tendency to an increase of discounts ("other securities") until the upheaval of 1915. The perturbation of the bank-accounts until November, 1915, as seen in the red and green lines of the chart, shows how long it took to recover again a fair adjustment to new war conditions. But it is to be noted

that this upheaval was on a scale far less than that of Germany and France (see Charts IV and V) and speaks volumes for the efficiency of the English credit system, or of the genius of the people for banking sense.

An interesting situation followed the aid given by the Bank of England in making liquid the pre-moratorium bills. The direct purpose of the action by the Bank was to render the bills marketable, and therefore discountable at the usual agencies of credit. It was not intended that the whole burden should fall on the Bank. Again the joint-stock banks failed to rise to their full duty. These bills being guaranteed but not yet matured need not have been discounted at once. In fact, however, the banks discounted the bills at the Bank of England beyond their actual need for cash, solely to cover unknown future contingencies.¹ Thus the banks had large balances at the very time when restricted trade caused a lessened demand for loans. Although short-term loans were repaid to the banks, they made no new loans. Due to this attitude, there was an abundance of idle funds, as indicated then and later by the very low market rate of $2\frac{1}{2}$ to $3\frac{1}{2}$ per cent or even less. Hence large sums of treasury bills were taken by the timid banks at $3\frac{5}{8}$ per cent to employ idle funds. Without doubt, we here have the evidence to show the absence of any reason for the moratorium. In a short period the Bank had met the need of a means of payment for acceptance houses and for acceptors of all bills drawn before August 4. There seemed to be a spirit in the government eager to push governmental interference without testing out tried expedients. As we shall see, the moratorium was the least of these mistakes.

Banks
discounted
unduly at the
Bank of
England.

The loss of their heads by the banks in refusing to pay

¹ Cf. J. N. Keynes, *Economic Journal*, December, 1914, p. 613.

out gold led to the fallacious belief that the restoration of credit depended on the issue of more money—the insidious microbe that multiplies without limit in the minds of finance ministers when trying to stem the difficulties arising out of war or panic. It is a part of the disease that assumes credit to be based on money; and of the more general theory that prices are directly affected by the quantity of money in circulation. There is no place here, however, for the discussion of this general theory.¹ Present attention must be given to the issue by Lloyd-George during the bank holidays of government notes to serve as money. Here, again, we must challenge a departure from English monetary traditions never before tried in the history of the kingdom. When the banks were open on July 31 and August 1, the fear was expressed that they might not have the cash to meet demands of their customers; that there “might not be money enough to go around.” It has been generally supposed that the bank holidays were extended to August 7 to allow time to prepare an emergency circulation in the form of currency notes. These had been authorized in the same Currency and Bank Notes Act of August 6, 1914, which had also suspended the Bank Act. The issue of currency notes for denominations of £1 and of 10 shillings by the Treasury were permitted and made unlimited legal tender.²

In effect they were issued through the Bank of England to bankers, to Scottish and Irish banks of issue, to the post-office savings-banks, and to the trustees' savings-banks, as a loan at the rate of 5 per cent up to a maximum of 20 per cent of their liabilities on deposit and current ac-

¹ See the author's *Principles of Money* (1903).

² Postal orders, under the same theory of scarcity, were also made legal tender. See Appendix I A.

counts,¹ and were a floating charge on the assets of the bank up to the amount of notes granted. In case advances were repaid by the banks, the sums went to a separate fund at the Bank of England, called the "Currency Note Redemption Fund," under public deposits. The notes themselves may have gone into general circulation, but the holder could by law get gold for them if presented to the Bank of England; thus, although they were not the obligations of the Bank, yet as a government agency the Bank had to provide the gold, and the notes were, in effect, an obligation on the gold funds of the Bank. A certain amount of gold was "earmarked" for the notes, which since July 28, 1915, has steadily remained at \$142,500,000. When the banks returned advances, they transferred deposits to their credit at the Bank to the account of public deposits, not, of course, producing any gold. Moreover, they used any of these notes in their possession in paying off loans from the Bank; since, also, they received nothing else from their customers. Most of the notes appear to have been issued directly in payment of wages, salaries, and the like.

Issue of
currency
notes.

The total issues of these notes have now (November 14, 1917) risen to \$956,500,000, against which the cash reserve is only 14.9 per cent, the remainder being covered mainly by government securities. The banks hold only \$245,000. The notes are, therefore, in effect a forced loan to the state and must be judged accordingly. The issue of a loan in the form of a demand liability of the Treasury has always been regarded as a sign of financial sterility. It confuses the fiscal with the

These notes
a forced loan
to the state.

¹ Hartley Withers estimates that under this regulation the banks could have taken \$1,125,000,000, but actually took only \$65,000,000. *War and Lombard Street*, p. 33.

monetary functions of the state. It is a poor way to borrow, and as a creation of new money it exposes the world of business to the perils of inflation, if not to the inevitable effects of a depreciation of the standard of prices and contracts. The fallacious thinking of the joint-stock banks, and their scare, had somehow tainted the monetary atmosphere. In England, of all places, where a loan would give a deposit account, where checks were the normal means of payment, and actual money little used except for retail transactions, it was passing strange that the need of the hour should be diagnosed as a need of more money, when in fact it was a need of credit—fully met by the Bank of England. In the country which had given to the world the deposit-currency (checks drawn on bank deposits), a marvellously flexible medium of exchange doing its work with a minimum of actual cash for paying balances, government issues could not possibly be justified because of any lack of an efficient medium of exchange.

Keeping in mind that the Bank of England issued no notes in denominations below £5, and that the needed money for pocket use was composed of gold sovereigns and half-sovereigns (with silver for fractional currency), it may be said that the notes, being made of denominations of £1 and of 10 shillings, would take the place of the gold and free it for the support of credit. It may also be true that some of this small gold was hoarded and change was scarce, as on the Continent. But, strangest of all, it was urged in favor of this radical and unprecedented departure in English policy that it would save the issue of Bank of England notes, and avoid the paying out of gold reserves by the Bank. Such points of view are, under the circumstances, inexplicable. The issue of bank-notes would have been the safe and traditional recourse. The Bank Act had been suspended

Why try to
avoid issue of
bank-notes ?

by the same Act authorizing the currency notes.¹ If notes of small denominations were needed to replace the small gold, it could have been safely accomplished, and kept within monetary rules, by permitting the bank to issue £1 and 10 shilling notes. The notes would thus have been confined to their monetary function, and not have been used as a fiscal measure for borrowing in a way condemned by all financial history. Nor would there have been thereby any serious enlargement of Bank of England notes. The examination of Chart II shows very plainly—supported by the history of the banking department since 1844—that exceptional needs for credit and a means of payment are fully supplied by loans and deposits; and that there has been, in addition, little demand for more forms of money to serve as a medium of exchange. The only justification for the currency notes was either that (1) they were absolutely needed as a medium of exchange, or that (2) their issue aided the lending power of the banks. The first has been shown to be baseless. As to the second, they could have been of use only if the gold they displaced had gone into the reserves of the banking department whose loans really maintained the credit organization of the country. There is no evidence to show that this gold went into the Bank of England. If it did, it went to the issue department. In truth, the great force which removed the congestion of credit, and put the frozen assets into liquid form again, was the lend-

No need for a
medium of
exchange.

Remedy not
money, but
credit.

¹ It does not seem to be accurate to say that the Act is or ever has been suspended "To provide a fresh stock of cash for bankers. . . . Because they are wanted to take the place of the cash that the frightened public has taken out and hoarded, and . . . because in times of panic many people refuse to accept payment in checks, which are now the usual currency of internal commerce." Hartley Withers, *War and Lombard Street*, pp. 8-9. Cf. p. 30. In the past, relatively few notes were called into general circulation at the time of suspension; and in 1914 there was no perceptible refusal of checks by the public. In fact, the public were calm. It was the banks that were scared.

ing power of the banking department of the Bank of England. And it is of more than passing significance that this end was accomplished without any perceptible resort during the height of the crisis to an increased quantity of bank-notes put out by the issue department under the suspension of the Act. From whatever angle we approach the subject we are forced to conclude that the efficient remedy was not a matter of money, but of credit.

The case for the currency notes, at the moment, however, seems to have depended upon the real need for such notes to be paid out as cash to customers by the banks, or upon the extent of hoarding which actually took place and caused a shortage in the gold normally used in transactions calling for denominations below the £5 bank-note. Two different considerations are here involved: (1) There was the need of reserves by which the joint-stock banks and their branches could meet demand liabilities. At the moment of confusion there might have been a feeling that legal-tender money was scarce, and those who found their assets locked up were in a panic. But at no time would it have been impossible for a joint-stock bank to have obtained a loan from the Bank of England and thus have secured bank-notes for its reserves. Moreover, they held large gold reserves in their own vaults.¹ Why should it have

¹ The mint authorities estimated that on June 30, 1914, about \$222,000,000 of gold were held by the banks (excluding the Bank of England) and \$391,500,000 by the public. (Cf. Kirkaldy, *Labour, Finance, and War*, p. 236.)

It was estimated by the London *Economist* (August 15, 1914) that English stocks of gold at the end of June, 1914, were as follows (in millions):

London joint-stock banks held actually in gold and Bank of England notes.....	\$250	
Bank of England.....	150	_____
Total in banks.....		\$400
In circulation.....		100

		\$500

For all the banks cash holdings were \$1,065, with deposits of \$3,700 millions.

been assumed that money was scarce? The banks at this critical juncture committed the greatest possible error. By their own refusal to pay gold, and by showing distrust of the Bank of England notes, they themselves created the only alarm which arose. Had they acted on the principle that reserves were to be used when called upon in exactly such an exigency, and not to be hoarded at the only time when needed, there would have been no example set for hoarding by the general public.

But (2) even under such suggestion coming from the banks, hoarding by the public seems to have been insignificant. It kept its head better than the banks. The reports of the savings-banks for 1914 showed trivial withdrawals.¹ There was a No hoarding
by the public. demand on the Bank of England for gold to go to the provinces for the week ending July 29, and for still more the next week, all told an internal drain of less than \$50,000,000 in these two weeks. Such a movement was, of course, carried on through the joint-stock banks and their branches. In Chart II it may be seen that in the week ending August 7, 1914, there was a drop in both note-issues and in reserves—in each case amounting to about \$50,000,000—but that before the month was out this subtraction was more than made good. It was obvious that the impetus given by the banks to force people to take notes to the issue department for gold caused a fall in the amount of notes outstanding. The withdrawal of cash is sufficiently accounted for by the internal drain. There the effect ended. To account for hoarding there must be some panic; but there was no panic, since nothing could be done during the moratorium and the holidays until Friday (August 7); and when the banks

¹ Cf. Kirkaldy, *ibid.*, p. 215. Sir R. H. Inglis Palgrave also informs us that there was very little hoarding by the public, it being even less than in 1866.

opened that day there was no run whatever by depositors.

Nevertheless, because of a scare among the banks, and a fear of a possible hoarding (which in fact did not materialize) a case of a certain sort might be made out in support of the issue of currency notes, as a temporary measure. Suppose the gold in the circulation below the £5 notes had disappeared.

How, then, could the banks supply manufacturers and others with cash for meeting pay-rolls, wages, and the like? Normally, this is easily done, for the cash is soon spent for goods and comes back again. Perhaps there may have been a wide-spread fear as to the soundness of credit; and an attempt may have been made to transfer obligations based on goods into actual money. On any great scale, of course, this never could have been done; and a panic would have ensued to be followed by slow and prolonged liquidation. But no such thing happened in this case. At the least there might have been a demand for cash in the strata of retail operations. Assuming this situation, it may have been necessary to provide an emergency currency to meet a sudden exigency.¹ On this theory the currency notes might have been justified; to be withdrawn when the exigency had passed. Yet whatever the justification for this purpose, it ceased to exist when the notes were later enormously expanded and used—because the repeated resort to the printing-press is easy when once begun—as a fiscal device for get-

¹ Kirkaldy mentions the need of additional currency in order to meet the demands of mobilization; to replace the small quantities of gold coins which had been transmitted unobserved to foreign countries; to replace the hoarding by the general public; to provide increased legal-tender reserves against the increased deposits of the joint-stock banks; and to furnish an additional money to meet the higher level of prices and wages. *Labour, Finance, and the War*, p. 230.

ting a loan. Moreover, even then, if any emergency circulation were needed, why not have supplied it, as already suggested, under the suspension of the Bank Act by getting permission to issue notes in denominations under £5? Indeed, the elasticity of credit, for which the English system is famous, could very simply have been supplemented by a body of small notes issued by the Bank to supply elasticity of currency in temporary emergencies.

The belief that the issue of paper money is necessary to cope with crises dies hard, especially where, as in France and on the Continent, a borrower expects to be supplied with notes, and does not use checks, in making payments. In England and the United States, even in a time of crisis, all that a man in distress wants is a means of payment acceptable to his creditors. If he can get a loan at a bank, a check on the resulting deposit account gives that acceptable means of payment. He does not wish bank-notes. They are needed only for retail dealings or for conditions when men lose their heads and try to turn credit obligations into cash. The only possible reason, therefore, for an emergency currency in England lies in this last contingency, arising from sudden alarm. The obvious remedy is that which would allay fear. In the past the suspension of the Bank Act has been effective, not because of any considerable addition to bank-notes in general circulation, but because it has assured the legitimate borrower of the certainty of credit if he needs it. It shows a lack of understanding of the true inwardness of credit methods in England to say, as does Liesse:

English
credit system
did not need
more money.

If the Bank of England had a less archaic and more flexible machinery of issue, the system would be perfect, and crises in the English market would be less acute. . . . The English

joint-stock banks . . . have not in the Bank of England the same resource [as the French banks have at the Bank of France], for it is just at the moment when it ought to increase its issue—that is to say, in panic times—that it is bound by the Act of 1844. *Every system of bank issue* must, then, tend to give . . . the greatest possible elasticity of issue in order to cope with crises. What, in fact, is needed at these difficult moments? *More currency than in normal times.* Who can supply it? A bank issuing bills against reliable securities, such as commercial effects. It is these effects that must be coined into money, and made to circulate, until calmer days arrive.¹

French
criticism of
English
system.

Such is the point of view of a country where payments are made only by actual passage of money. It is the error of confusing the elasticity of credit with the elasticity of the currency which was recognized here in creating the Federal Reserve system. Commercial assets can be coined now at the banking department of the Bank of England into a means of payment quite as effective as any form of money or bank-notes; and it was true at the height of the panic in 1914.

There remains, nevertheless, the means of supplying small notes, or a limited quantity of emergency circulation, to cover hoarding or acts of fear by ignorant persons.

If the issue of less than £1 notes by the Bank would not cover this possibility—although I think it would—then give the Bank the power to issue, under strict banking, not governmental, surveillance, a certain quantity of emergency circulation based on the deposit of picked commercial paper (as suggested by Sir R. H. I. Palgrave)²

Emergency
notes based
on
commercial
paper.

¹ *National Monetary Commission* (1909), No. 522, pp. 195, 216.

² *Bankers Magazine*, April, 1915, p. 592. Also October, 1914, p. 458. Lord Sherbrooke's scheme of 1873 based the emergency notes on securities rather than on commercial paper. Our Aldrich-Vreeland notes were based on both; while our new Federal Reserve notes will in the end require only commercial paper.

to be automatically retired as soon as the emergency has passed. The mere possibility would no doubt make actual resort to it unlikely, especially so long as the Bank by freely discounting provides an elastic deposit-currency based upon an elasticity of credit.

§ 5. The maintenance of the gold standard by Great Britain, in contrast to the action of all the other European belligerents, and in spite of her issue of currency notes by the Treasury, is an outstanding fact of the first importance. Nor is its influence on the credit situation and on prices of any less significance.

The preservation of the gold standard, in all the stress of an unprecedented war—in contrast to the policy of Germany and France, which sucked up all the gold that could be obtained from the general circulation, accumulated it in the central banks, and yet from the beginning suspended specie payments on their bank-notes—is undoubtedly due in part to the British traditions in favor of gold payments, and in part to the control of the seas, which kept open the routes to other nations holding stocks of gold, and to one important source of production, the Rand in South Africa. It is not generally realized that the war has not reduced the output of gold from the mines; in fact, it has even increased. In the calendar year 1914 the total for the world was \$439,078,260, in 1915, \$470,466,214, and in 1916, \$457,006,045. Of this total, only about \$30,000,000 comes from Europe, and that mainly from Russia. The remainder comes from North America, South America, Australia, Asia, and Africa, accessible to English ships, while the Central Powers yield a negligible amount. From Africa alone comes over \$200,000,000 a year. By her geographical and commercial position Great

Why British
could
maintain
gold
standard.

Britain had a commanding advantage for maintaining the integrity of her monetary and credit system. To prevent this in time of war is part of Germany's demand for the "freedom of the seas."

The stocks of gold in the leading reserves of the world, July, 1914, were as follows (000,000 omitted):

CHIEF GOLD RESERVES

Bank of England.....	\$190
Bank of France.....	880
Bank of Russia.....	800
Reichsbank.....	340
German War Reserve.....	50
Bank of Austria-Hungary.....	255
Treasury of the United States.....	1,184
National Banks of the United States.....	168
Argentine Caja.....	200
Brazilian Caja.....	50
	<hr/>
	\$4,087

All these countries, including the Dominion of Canada, suspended gold payment except Great Britain (including India and the Cape) and the United States.

The visible gold holdings of the British Empire are estimated in 1916 as about \$870,000,000.¹

In the crisis which, as we have seen, threw an enormous burden of discounts on the Bank of England, was there the usual accompaniment of both an internal and external

¹ (In millions)

Bank of England.....	\$256.6
Currency Note Reserve.....	142.5
Commonwealth Bank.....	55.1
New Zealand Banks (about).....	30.0
Canadian Central Note Reserve.....	11.7
National Bank of Egypt.....	35.6
Indian Gold Standard Reserve.....	25.7
Indian Note Reserves.....	58.9
Straits Settlements Note Guarantee Fund.....	3.9
English, Scotch, and Irish Banks (and in public circulation), about....	250.0
	<hr/>
	\$870.0

Cf. E. F. Davies, The Finances of Great Britain and Germany, p. 51.

drain upon her gold reserves? Of the internal demand, we have already had some discussion; it was chiefly from the joint-stock banks. Possibly the currency notes supplied needs which might have required some gold from the Bank. But as regards the demand for exportation, the peculiar nature of a war with customer countries on the Continent cut off shipments to the Continent, except in a small way to France. Later all exports of gold ceased. It was argued¹ that, as England was a creditor nation, to whom large sums were due on call from foreign centres, she could turn the tide of gold in her direction by so simple a measure as refusing to renew maturing loans to foreigners, or by asking for gold in payment of sums to her credit on the running international account. The call upon the United States, for example, as we shall see later,² was unexpected and painful, yet it was duly responded to; but other countries, having a moratorium, or having suspended gold payments, could not pay in gold. Moreover, German war-ships were at sea and made the carriage of gold very hazardous in the early part of the war.

English
control of
gold on call.

In order to overcome the risks of moving gold over the seas, vaults for receiving gold to be counted in the belongings of the Bank of England were established in Ottawa (Canada), Johannesburg, and later in Australia. Since nothing had been mentioned in the Act of 1844 as to the location of the reserve, the precedent had already grown up of reckoning in Bank reserves gold at the mint; and this practice was now extended to counting as reserves gold deposited to the credit of the Bank in Canada and South Africa. The office at Ottawa served to settle dealings between Eng-

Gold in Bank
of England
increased.

¹ Cf. J. N. Keynes, *Quarterly Journal of Economics*, November, 1914, p. 49.

² *Infra*, Chap. VI, § 6.

land and the United States, and that in Africa was conveniently accessible to the new output from the Rand.¹ The gold reserve of £28,500,000 behind the currency notes was obtained from abroad. Moreover, gold in the reserves of the Indian Government was transferred to the gold reserves of the Bank of England. Thus by September 19, 1914, the Bank had received an addition to its gold of nearly \$120,000,000. Later, after the example of Germany and France, the Treasury, on August 8, 1915, instructed the post-office and all public departments to use notes instead of gold; and it requested the public to pay in gold to the post-office and the banks, to ask for notes instead of gold in payment of checks, and to use notes rather than gold in payment of wages and all cash disbursements.

Under these conditions the gold holdings of the Bank nevertheless steadily increased by the end of 1914 to about \$350,000,000. Since then, through changes in the balance of trade and the necessity for exporting gold to support sterling exchange, the stock of gold has been reduced to about \$250,000,000 or less. (See Chart II.) Keeping in mind that we are not now dealing with the reserves of the banking department, which are mainly in notes, and whose percentage to deposits is stated when the reserves of the Bank are reported to the public press, the pivotal question is the maintenance of the whole fabric of money and credit on the gold basis. This rests on the ability to get gold on demand. The basic fund is that in the issue department lying behind the covered bank-notes (above £18,450,000). That gold fund is now

¹ At Ottawa cash on London for gold bars is given at the rate of 77s. 6d., and in United States gold coin at 76s. ½d. At the office in South Africa, at the rate of 77s. 9d. up to 97 per cent of the deposit of gold, the balance to be adjusted on its arrival in London. Cf. J. N. Keynes, *Economic Journal*, September, 1914, p. 476.

(1917) absolutely higher than in July, 1914, by \$86,-000,000.

How this general result has been accomplished is not perfectly clear. At the start there was an evident vacillation on the part of some of the joint-stock banks as to the maintenance of gold payments, and an attempt, as said, was made to bring the Bank to that view. The steady movement of new gold into the hands of the Bank, the absence of all demand for the Continent, have obviously enabled the Bank to use great sums to protect exchange and yet to keep the home situation fairly secure. Doubtless, there is a general understanding that it would not be patriotic to demand gold from the Bank.¹ So long as this situation is maintained, no perceptible depreciation will take place; but immediate redemption in gold, in the strict sense, probably does not exist, when English bills of exchange remain at a discount of about 2 per cent in the New York market.

Redemption
in gold not
wholly free.

§ 6. Out of the rough school of war some lessons in the adjustment of capital and credit to new and surprising conditions seem to be emerging. The sudden crisis on the outbreak of war, which stopped the normal operations of peaceful business, left the future very uncertain. But quite as truly as there

Adjustment
to war
conditions.

¹ It has been said that gold is in free circulation, and that its export is not prohibited. But Mr. E. L. Franklin is quoted by Kirkaldy (*Credit, Industry and War*, p. 249) as saying: "At the present time, notwithstanding that there is no prohibition placed on the export of gold to neutral countries, no bank or banker can be found who will avail himself of the benefits accruing from such transactions, because it is the general opinion, whether justified or not I will not say, that it is against the interests of this country for gold to leave England, so long as other governments do not allow gold exports from their countries." It is certain that free exports of English gold to some neutral countries would have gone to swell German reserves. It would have been different with exports to the United States.

is one normality of credit in times of peace, so there is one in times of war. The period between the break with peace and the final adjustment to war is one of stress and uncertainty. Nevertheless, in war there is a possible normality of trade and credit as soon as a certain adjustment is reached. The crisis on the outbreak of war is not the end of the world, nor of so-called prosperity. The old gives way to something different; but the principles at work are not different.

A striking example of the reconstruction of credit out of a period of confusion is given in the course of events arising from the operations of the Bank of England. (See Chart II.) These operations present the inner and vital life of the credit system of Great Britain, and are well worth more detailed study than we can give them in our general treatise. Only large results can be here noticed. At once there is presented to the eye unmistakably that the first period, that of stress and uncertainty, continued until November, 1915; and that the second period, that of attained adjustment to new conditions, has steadily continued to 1917. What the manifestations may be in the final adjustment from war to peace, or whether they may form a third period, cannot now be affirmed.

In the early part of the first period the dislocation of trade was great (see Chart II), but not as drastic as in later months. The industries immediately affected were the fisheries, coal, steel, linoleum, jewelry, diamonds, and ostrich feathers (South Africa), sugar, linen, cotton, woollen goods, and shipping. Since one-quarter of the normal English trade had been in the North Sea and the Baltic, and that with Germany alone had amounted to \$550,000,000 annually, interruptions to business were severe and general. Early

Stress shown
in bank
accounts.

Early
dislocation
of trade.

in September, 1914, the Lancashire textile operations were at a standstill. Inasmuch as four-fifths of the output of cotton goods were for export, the demoralized condition of foreign markets hit hard at home prosperity. The shipyards were idle. There was much unemployment. A few German war-ships were still raiding English commerce in the South Atlantic. A considerable North Sea trade was still going on, although rates for freight and insurance were very high. At that time the busiest ports in Europe were Christiania and Gothenburg, which drew large cargoes and gained rich returns. A large trade to Hamburg was carried on by way of Sweden and Norway. In August, 1914, under the alien's restriction order, German banks in London were granted licenses, but with such strict limitations that they were practically obliged to liquidate.¹

The dislocation of English foreign trade by the end of 1914 has been thus summarized by Bowley:²

During the five months beginning August, 1914, less than two weeks' imports was lost from the Empire, and from non-belligerent foreign countries, and that even of this much was simply delayed by congestion at the docks. The enemy's efforts to check our supplies from countries not actually at war have thus had less effect than a minor trade crisis and about as much as a moderately serious strike of transport workers.

With exports . . . the position is different. . . . Judging from the trade of December, 1914, and January, 1915, the scale of our exports of home produce has shrunk so as to cause a diminution (if there is no change) of about £230,000,000 per annum, of which £100,000,000 is due to loss of trade with Germany, Austria, Turkey, Belgium, and Russia; re-exports have

¹ Three branches of German banks in London—those of the Deutsche, Dresdner, and Disconto Gesellschaft—were forbidden to open on August 7, 1914.

² A. L. Bowley, *The Effect of the War on the External Trade of the United Kingdom, 1906-1914*, (1915), pp. 53-54.

also diminished; meanwhile imports approximate to their old level of value. . . .

The excess of the value of imports over that of exports will tend to reach £350,000,000 or £400,000,000 a year. So far as can be judged this total is little if at all more than the amounts due as interests, profits, etc., from abroad, together with the high earnings of shipping, which at once cause part of the excess and help to meet it. . . .

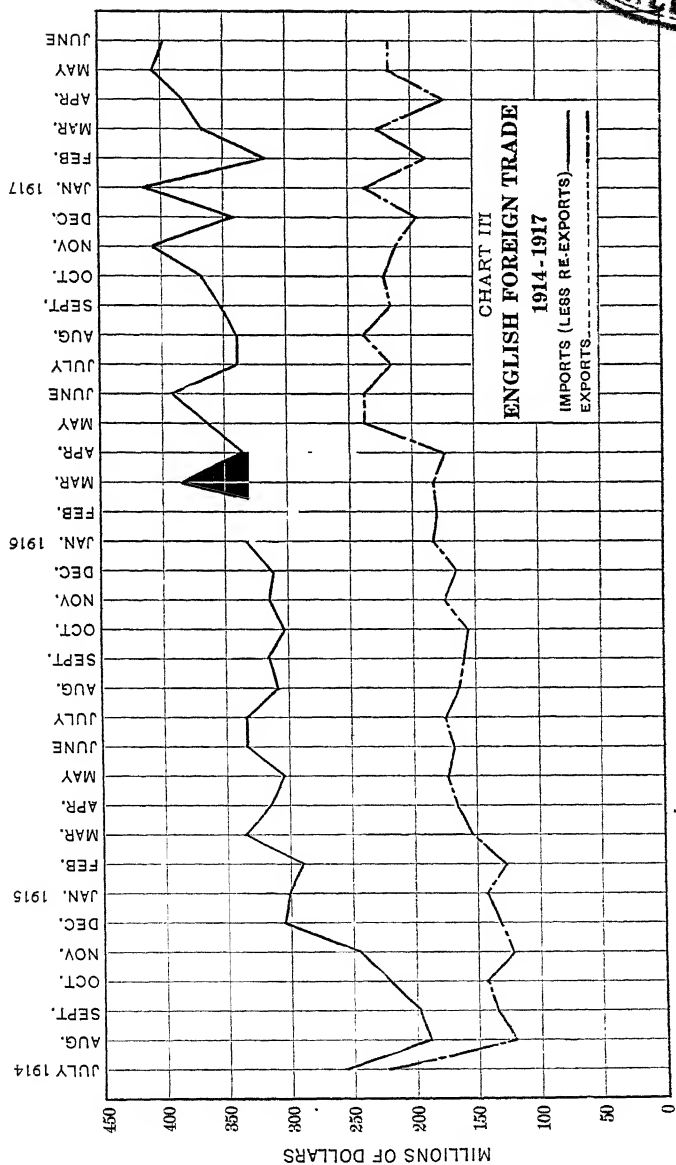
Finally, it appears that our dependence on foreign and colonial supplies and our possible vulnerability at sea have had as yet hardly any visible effect on our production or consumption; for prices must rise, credit be temporarily disorganized, capital cease to accumulate, production be checked and industry diverted, in any country engaged in a serious war, whether it be insular or continental, trading or self-sufficient.

The subsequent course of English foreign trade was as follows (in millions):

	Imports less re-exports	Exports	Excess of imports
1914, July-December.....	£284.7	£174.8	£109.9
1915, January-June.....	377.8	183.7	194.1
1915, July-December.....	377.7	201.0	176.7
1916, January-June.....	420.8	241.8	179.0
1916, July-December.....	430.1	264.4	165.7
1917, January-June.....	456.7	251.1	205.6
Totals, three years.....	£2,347.8	£1,316.8	£1,031.0

The trade for the first three years of war may be seen month by month in Chart III. It is not clear whether or not the lapses in 1917 for both imports and exports are in any way assignable to the submarine warfare. In May, 1917, however, imports were at the high point of the war.

It was the collapse of trade at home which supplemented the crisis due to the inability of foreigners to meet their pre-moratorium bills, and hence reduced the domestic



bills offered in the money market. Manufacturers' orders had ceased in August (except for government contracts), hence the need of loans to cover existing obligations. The shortage in normal business explains why the bill market did only 5 per cent of its usual peace transactions. Because of the needed loans, deposits (arising from loans) were higher at the end of September than at the end of July, 1914. (See Chart II.) Mr. Lloyd-George was impatient that, after the load of pre-moratorium bills had been taken off by the Bank of England, the banks did not discount more freely. In truth, the basic movement of goods from which bills arose was not going on.¹ Normality could not return until goods began to move normally. As soon as the ocean was cleared of enemy ships goods began to move, but in new directions. The diversion of productive power into the making of munitions of war soon stopped all unemployment. The purchase of supplies abroad, especially from Canada and the United States, began on an unexampled scale; so that exports and imports, reckoned at the steadily increasing prices, mounted high and absorbed all free mercantile tonnage. While a very considerable part of the pre-moratorium bills were being slowly liquidated by the drawers, there was a tendency of discounts (see the line of "other securities") to fall; but new requirements, notably in connection with the subscriptions to the national debt, and the mobilization of foreign securities, had the effect of raising the total discounts. The countries like Canada, South Africa, South America, China, and Japan, which had

Early
collapse of
home trade.

¹ Professor J. N. Keynes takes the view that new movements of goods could not take place because of the "difficulty of drawing bills, capable of being discounted," *i. e.*, because the accepting houses were not in a position to do new business. "War and the Financial System," August, 1914, *Economic Journal*, vol. 24, p. 467.

been supplied with capital for building their railways and public works, could no longer expect to borrow from London, for English savings went into the war loans.

War inevitably interferes with the normal movement of capital to its predestined occupation. It can no longer go as formerly to enemy countries for investment and profit, and the arrested activity of neutral countries offers less opportunity for its use.

Effect of war
on the
mobility of
capital.

It can do nothing without trained and acceptable labor; but the diversion to war of men from every industry lessens the outcome of the joint efforts of capital and labor. The swift change in the demand from articles of peaceful consumption to those of unusual character and on an unbelievable scale of production introduces the element of risk in a situation which every one knows cannot be permanent. In the state of mind engendered by such uncertainty, the production of munitions goes on feverishly because of necessity, but no new enterprises reaching out into the future can obtain the use of capital. Then the borrowings of the government on a colossal scale soak up the capital which might have retained an industrial use; and, if desirous of subscribing to a public loan, the owner of a security finds that unexpected readjustments of established investments to a rising rate of interest have made violent changes of price in the markets, so that his depreciating holdings can be sold only at a loss. Even the long-kept bundles of foreign securities are forced out of the strong boxes to be sold in order to support a nation's credit. While, before him, all the time looms the spectre of a new upheaval of prices and uncertainty, when it shall become necessary to make the adjustment to the difficulties following the close of war. No longer is it

possible to provide the needed capital at home and yet satisfy the eager demands of newer lands accustomed to borrow capital for their own development. Indeed, it may be a serious question whether the usual forms of capital at home, such as those invested in railways and plants can, under the wear and tear of excessive use, be kept intact under the strenuous exactions of war.

How sound was the substructure under this credit situation? Credit obligations on a very large scale entered into in terms of money must be met sooner or later according to the bond. Could it be done? While in theory every maturing obligation had to be paid in money, yet they were met in fact by an acceptable means of payment supplied by credit devices. Normally, the test of solvency for the vast body of credit transactions has been applied through a steady repayment by the proceeds arising out of the production and sale of goods. But, as a result of the crisis, a heavy burden of pre-moratorium bills had been taken over by the Bank of England; these bills, unliquidated, were dead assets on which a deposit-currency of practically equal amount had been created as a means of payment between members of the community. Did the guarantee of the government to protect the Bank against loss on these assets give them life? The government turned over no proceeds from goods produced and sold. It only gave a promise of proceeds due to the power of the state to levy taxes in the future. Thus a considerable part of the current means of payment provided by the Bank of England depended upon future goods. It was as if a temporary scaffolding of timber had been inserted into a gap caused by the destruction of a section in a great steel bridge over which a stream of trains must constantly pass. Was it safe? Obviously,

Soundness of
English
credit.

it was not intended to be permanent. In this time of transition it was the function of the English credit organization to provide borrowers with a sufficient means of payment acceptable to creditors, whether a certain part of its assets were ever made liquid or not.

But was there any serious risk in creating such an immediate means of payment on the promise of future goods? Of course the Bank itself was protected against

Credit gave
time for
liquidation. any loss to its assets. It is the function of credit, however, to provide present means of payment and take the risk of a repayment in

the future. Futurity is the very essence of credit. To a well-established, going concern credit is legitimately given on the basis of goods not yet finished but, humanly speaking, certain to come forward in due course. The institution giving credit forms its own judgment as to this certainty and assumes the risk. It is the uncertainty that may be injected which gives the risk a greater force. The risk of short-term paper is quickly tested; but not so with a credit running long into the vicissitudes of a war-stricken future. When it is considered that five or more of the richest nations, with half the population of the world, were devoting all their energies to destruction, rather than to production of goods for normal purposes, one can understand that the customary currents of demand for staple goods would be stopped at home and abroad. Losses were accepted and makeshifts resorted to in attempts to meet obligations. Hence the need of discounts to gain time and to make readjustments. Such recourse the organization of credit supplied in this period of gusts and uncertainty lasting to November, 1915. From March, 1915, to November, 1915, the excess of discounts over deposits (see Chart II) shows a time of great pressure, greater even than at the very outbreak

of the war. It is clear that the remedies adopted to meet the crisis had not been such as thoroughly to complete the task. The free and normal activity of credit was not yet doing its perfect work. Much of the unliquid assets had been released, to be sure, but so long as emergency measures remained in force they constituted a proof of the greater or less abnormality of credit conditions. As early as November 27, 1914, the chancellor of the exchequer reported that the total of the bills discounted by the Bank of England, and which had been guaranteed by the government, amounted to about \$600,000,000. Inasmuch as the volume of bills impending over the market at the height of the crisis was treble that sum, it was evident that very large amounts of bills had been taken up in due course. Herein lies the real test of the character of English credit. If the transactions were of a nature to liquidate themselves for the most part, the foreign bills whose drawers had been hopelessly caught in the swirl of war could be carried through to times of peace and allowed time for recovery.

In its wider meaning the piling up of a great war debt is a means of putting off to a longer future the repayment of the sums used in destructive war operations. Credit has enabled the nation to discount its future industrial capacity in return for the means of present payment, but the vacuum of lost goods must be filled again before real liquidation can ever be accomplished. But Great Britain has had an advantage of importance in its keeping open the Atlantic trade (however minimized later by the submarine), thereby supplying its demand for present goods which its own capital and labor, given over largely to war industries, could not produce in the quantity needed. That is, by the mobilization of American securities held by English-

Need of
present
goods.

men they could *pro tanto* be returned to us in exchange for goods imported into England. A liquidation in goods was therefore going on with the severance from English owners of a large volume of investments. Thereby the English credit situation was somewhat strengthened.

The general result may be observed in Chart II during a period of sustained steadiness in credit transactions, even at a higher level, which has continued since November, 1915. The adjustment of the foreign exchanges to the altered relation of American exports and imports forms a part of the reorganization of credit in this period. There had been reached, as nearly as it can be, what may be described as the normality of credit during a time of war.

The solidity of the fabric, being thus referred to the outcome of future events, is finally made dependent on the prospective industrial efficiency of the whole nation.

During the period of war there can be no doubt of the vastly greater productivity of the labor force, aided by those not formerly workers and the stimulated energy of all industrial management, in the work of making war supplies. The completed liquidation after the war is, then, mainly a question of the quality of industrial efficiency which will issue from past traditions mingled with the unmistakable stimuli due to the war. Without doubt the productive factors will be more active after than before the war. The basis of English credit must be gauged accordingly.

§ 7. The creation of a new precedent in the issue of government paper money, even though supported by a small gold reserve, started an inevitable discussion on the principles of money and credit which, in the end,

may be as extended as that on the depreciation of bank-notes during the restriction period. The currency notes gave rise to the fear of inflation; and, as credit appeared as purchasing power, to the effect of money was also joined the effect of an extension of bank credit, as measured by the increased volume of deposits (arising from loans). That inflation had followed was assumed because of an admitted rise in the prices of many goods. Inflation and rising prices were regarded as twin children of an increasing volume of money and credit. Such were the assumptions.

Fear of
inflation.

As to the fact of a rise of prices there can be no doubt. There have always been objections to the use of both the Sauerbeck and *Economist* tables of prices as evidence of a change in the general price level, because they are both limited to a narrow range of commodities, the former mainly to extractive products (45), and the latter to only 22 commodities, in which cotton has too large an influence.¹ Nevertheless, these tables, with their limitations, provide the only available English data at the present time. In the Sauerbeck table, starting from an index number of 85 (the average in each year, 1912, 1913, and 1914), the rise had reached 168 in March, 1917,² or an increase of 98 per cent. That is, in a group of vegetable and animal food, sugar, coffee, and tea, minerals, materials, and textiles, the prices on the average had practically doubled. In the *Economist* table, from the end of July, 1914, to the same date in 1917, the rise was 106 per cent; or, to September, 1917, even to 120 per cent. Without much question there may be assumed a rise of 100 per cent in most prices.

Extent of the
rise of prices.

¹ Cf. Laughlin, *Principles of Money*, pp. 175-190.

² See *Royal Statistical Journal*, March, 1917, p. 291, for wholesale prices in 1916, continued by the editor of the *Statist*, Sir G. Paish.

A statement of the mere facts as to the rise in the level of prices, however, conveys no explanation whatever as to the causes which have produced that rise. To assume that because there has been a rise of prices it must be due to an inflation of money and credit, assumes all the questions at issue. It takes for granted, as a premise, the truth of the obsolete quantity theory of money—which cannot be granted. A typical expression of this view during the English discussion may be given as follows:

Quantity
theory called
in.

Price is a function of two variables: it varies directly in proportion to the supply of money of all kinds and inversely in proportion to the quantity of goods or transactions to be handled by money.¹

This view omits some important elements lying in the very definition of price. To most economists price has been the ratio of exchange between goods and some standard money. For instance, the price of a ton of steel is the quantity of gold for which it will exchange. If so, the price of steel, or of any commodity, is (to be accurate) a function of two variables: the forces affecting the value of the standard money and those affecting the production and marketing of steel. To omit the latter and to assume one-sidedly that prices are influenced solely by forces on the money side of the price ratio is to overlook half the problem. In the view above given the two variables there mentioned, if true at all, concern only one of the factors in price-making. Who does not know that the price of steel has been lowered by inventions and cheapening processes, quite independent of the demand for or the supply of gold?

Error
involved.

¹ In the address of Professor H. S. Foxwell, on "Inflation," printed in *The Insurance Record*, March 30, April 6, and April 13, 1917.

But the burden of the case has been transferred to credit. Much has been wanting in precision when money and credit have been introduced into the exposition of the more modern quantity theory. In the main, it is assumed that credit has the same effect on prices as money. If loans at banks are expanded, inflation can appear, it is said, and of course prices would rise. If prices have risen, it is taken for granted that there must have been, if not an inflation of money, then an inflation of credit. Such a view is quite as one-sided as the other.¹ It eliminates all forces affecting the goods themselves in the price ratio. It crowds under the phrase "other things being equal" factors touching price which have far more practical importance than the volume of money or credit. The elements, like rising wages for the same productive effort, entering into the expenses of producing goods are ignored. Such theorizing has not enough of practical utility in it to live.

Inflation of credit.

To argue that because there has been a rise of prices it must be due to an inflation of money or credit is a complete *non sequitur*. Nor is it any more possible to prove the relation statistically by showing a correspondence between the volume of money or credit and the change of prices than it would be to tabulate the cases of sore throat to explain the spread of diphtheria. To compare the statistics of price with those of money and credit and to argue from a correspondence that one is the cause of the other is to assume at the start the validity of the theory which it is attempted to prove. Moreover, if the causes of a rise of prices are to be shown statistically, then let all the facts of labor,

Rise of price not due to inflation.

¹ Cf. *supra*, Chapter II, pp. 63, 68. For a more extensive examination of the relation of credit to prices, see Laughlin, *Principles of Money*, chaps. IV, VIII, and IX, or pp. 110, 125-128, 136, 247, 314-321.

wages, efficiency, costs of materials, freights, skill of management, machinery, new processes, taxation, insurance, and the like, which are affecting the expense of producing every known commodity, be also introduced into the investigation. The causes affecting the level of prices are too many and too complicated to be explained by a mere rule of thumb applying only to a single factor like the quantity of money or of loans.

Inflation obviously connotes an increase either in money or credit. Sometimes it is used to explain a depreciation of the currency. But an attempt to increase

A rise of
prices due to
depreciation
of money.

the volume of money or credit when there is quick and immediate redemption in gold, or like payment on maturity of all bills, would carry with it its own correction: par would always be maintained, and the quantity outstanding would be automatically adjusted to the needs of the public. The quantity of money or credit could not thus be depreciated, unless with the unregulated increase of volume there went a cessation of immediate redemption in gold. In such a case, charge the depreciation to inconvertibility. Not infrequently compilations have been made of the increase of note-issues since the war began by Germany, France, Russia, Italy, Great Britain, and the neutrals to show that the increase of the fiduciary circulation has been twelvefold, with the intent to explain the rise of prices in all these countries. Here is the obvious mistake of ignoring the effects of giving up convertibility of the notes in Germany, France, Russia, and elsewhere. If immediate redemption in gold be abandoned, then, of course, depreciation can set in to any extent. When the standard of prices depreciates, prices must inevitably rise to an equivalent or even greater extent, whether the increase in the issues be large or small, or none at all. The

cause lies not in the volume of the issues, but in the want of redemption. Inconvertibility has been a main factor in the depreciation of the German mark and the Russian rouble. In England there is what has been termed "restriction by consent," since it was not possible to export gold unofficially. But there is no evidence of any depreciation of currency notes relatively to gold, or the existence of paper, as distinct from gold, prices. If so, the volume of note-issues could not have caused any change of prices different from those established on the gold standard.

The actual increase¹ of the notes of the Bank of England shows no inflation, since it is accompanied by a corresponding increase in the cover of gold. In the case of the currency notes, after subtracting the gold reserve behind them (\$142,500,000) there is a clear addition to the circulation of \$761,000,-000. But the joint-stock and private banks of Great Britain have increased their cash and money at call by \$570,000,000; so that, apart from displacing small gold in circulation, a very large part of the currency notes must have found a resting-place in bank reserves. So far as concerns the circulation in the hands of the public, there seems little evidence of redundancy.

Increase in
circulation.

¹ (In millions)

	July 29, 1914	October 3, 1917
Bank of England notes.....	\$275	\$359
Currency notes.....	....	761
Bank of England loans (other securities).....	236	492
	(1914)	(1916)
Joint-stock banks (deposits).....	4,475	5,774

The figures for the joint-stock banks are the yearly returns. Cf. *London Economist*, May 19, 1917, p. 863.

But have the increased bank reserves led to an inflation of credit? Combining the loans of the Bank of England with those of the English joint-stock banks (using deposits as a measure), there has been a rise of not over 33 per cent. When it is recalled that a considerable part of these discounts have been made on pre-moratorium bills not yet liquidated, the total increase in three years does not seem significant of inflation. Certainly there is nothing which could be appealed to as the cause of a rise in prices of 100 per cent. Nor can it be inferred from these figures that the loans of the banks to subscribers for national loans has created a huge fictitious purchasing power which has carried up the level of prices. If such loans have been made, they must have been liquidated largely from time to time. So far as inflation is concerned, an examination of Chart II shows that at the Bank of England after the middle of 1916 discounts never but once exceeded deposits. Indeed, the obvious inference from the operations of the Bank in this chart after the end of October, 1915, is that there has been a decline or steadiness of discounts. The previous time of upheaval was distinctly left far behind.¹

The logical outcome of our inquiry makes it necessary to find a cause for the admitted rise of prices outside of the supposed expansion of the currency or credit. Causes enough lie ready at hand in the events of war. The dislocation of exports and imports, the scarcity of shipping, the high freights, the cutting off from normal sources of supply on the Continent, the reduction of the North Sea trade, the shortage of the world's crops, would alone have explained the high prices of many products in English markets. But unquestionably the main effect of the war in raising the cost

Expansion of
credit slight.

Rise of prices
explained.

¹ Cf. *infra*, pp. 139-140.

of living and the general level of prices was the withdrawal of the laboring force to the fighting-lines, with the necessity of paying exceptionally high wages to an army of workers in the munition factories, and hence a rise of the scale in all other industries. All raw materials—coal, copper, iron, and steel, rubber, dyes, chemicals, sugar, wool, and cotton—in addition, rose to high prices. Taxes increased. In fact, every item entering into the production and marketing of all kinds of goods felt the upward movement of higher costs. It would have been incredible if the general level of prices had not risen for these causes alone. It does not seem necessary to summon in the volume of the currency or of credit to explain what is so clearly referable to other forces.

§ 8. Closely related to the maintenance of the gold standard, and also intimately bound up with the fundamental questions of credit and the movement of goods and securities, was the problem of the foreign exchanges. After the relief of the market from the heavy burden of pre-moratorium bills and the rescue of the accepting houses, the task of keeping the rates of foreign exchange within bounds has been at once the most difficult and the most interesting of the credit operations induced by the war. Here, again, if we do not keep in mind some established general principles, we are lost in a maze of technicalities. It is said that the foreign exchanges broke down. In reality, what lay at the bottom of the difficulties was a cessation in the movement of certain goods and a shift of trade into new directions. It is from the sale and international movement of goods (and securities) that forms of credit, like bills of exchange, arise. The mechanism comes into action automatically, as soon as trade begins.

The foreign
exchanges.

From England's point of view there are two clearly defined periods in the workings of the foreign exchanges. The first runs from the outbreak of the war to about the middle of November, 1914, and is characterized by a high premium on bills in favor of London. The second period, running to the present time, is marked by a decided fall, followed by a recovery and the maintenance of a slight but steady depreciation of bills on London.

The first period was one of confusion, in which expectations were based on the continuance of normal trade balances. The war, however, broke up normal relations as respects (1) enemy countries, (2) allies, and (3) neutrals. In normal conditions the rate for bills cannot swing above or below par, beyond the charge for gold shipments, *i. e.*, it is hemmed in by "shipping-points." If the price is forced above the shipping-point gold is sent abroad; if below, it is imported. But war removed the shipping-points, and allowed the rate to wander at will. The suspension of specie payments, the prohibition of exports of gold, the enforcement of a moratorium on the Continent, and by nearly every country except the United States, broke down the normal supports to the prices of foreign bills. Judging from past traditions, English economists argued in the beginning that England need not suspend specie payments, for the reason that, as a creditor nation, gold was due her on call from all other financial centres. If, however, England in fact maintained specie payments, it was not because gold was due her on demand; indeed, gold could not be transported for a time because of maritime risks. Later gold came from the United States and South Africa, and even before the seas were safe, to Ottawa and Johannesburg. At the very

Two periods.

In first period
of confusion
shipping-
points
disappeared.

outset an attempt was made to call in short-term obligations; and even in the few days before war was declared there was a stampede on the Continent and elsewhere to buy sterling bills, so that their prices were forced up to a very high level by the exceptional demand. In European countries, since goods had ceased to move, and stock exchanges were closed, it was impossible to get exchange at any price. Exportation of gold from them to cover balances was forbidden, arbitrage operations on triangular trade was no longer possible, and there were no finance bills. In New York the rush to pay London for loans on warrants (£13.5 millions) coming due in September, and on a running trade balance due England before the next January of at least \$450,000,000, sent the price of £1 in London up above par of \$4.86½, above the shipping-point of about \$4.90, to as high even as \$7, there being a rise of 30 per cent in one day. In fact, gold itself was not moving freely, and foreign bills could not be met. In that case, as in a similar domestic emergency, the proper credit remedy was to renew; indeed, it would have been highly profitable to London bankers to renew at the high value of the English pound. It should have been realized, however, that sooner or later goods must begin to move and create bills; but what no one seemed to foresee was the coming and inevitable purchase of war supplies from America. This new movement of goods came, but on such a prodigious scale as to entirely reverse the creditor position of England in foreign trade—a movement which was as unexpected by us as by the English.

High price
for exchange
on London.

The second period began when there arose an unprecedented demand from the Allies for imports of breadstuffs, horses, mules, harness, wagons, trucks, guns, shells, raw materials, and all sorts of military supplies. When Eng-

land awoke to a realization of the portentous war task she had undertaken, and the organization of factories for producing munitions struck its full stride, she exported

In second
period a
reversal of
foreign trade.

less than before. Consequently, instead of having the traditional balance of trade in her favor, England owed a large balance to other countries, mainly to the United States. This

situation created an entirely new problem of credit, called the restoration of the exchanges. Here, as always, the problem of credit arose from a change in the movement of goods. One of the striking consequences of the war has been a phenomenal shift in the holdings of gold from one centre to another, based upon a marked change in the direction in which goods came to move; and these basic phenomena recorded themselves in the market for international exchange. It is the function of credit to reduce the effect of great discrepancies in trade balances, to carry settlements forward to easier times, and by disposal of international securities or other devices to postpone and minimize the actual shipment of gold, which goes only as a last resort when all other means of offsetting accounts are exhausted.

Since England now owed others for unprecedented imports (financing these for her allies as well as for herself), there was a great demand for international means of

Price of bills
on New York
high.

payment, namely, bills of exchange, acceptable in those other countries, particularly in the

United States. The price of bills went up, and Europe paid an increasing premium above par for a claim to a dollar in New York; or, *vice versa*, in New York a claim on Europe could be bought at less than par. The situation got out of control before the big forces at work were finally harnessed. At the point of extreme disturbance, September 1, 1915, £1 could be

bought in New York for \$4.49, as against a par of \$4.86 $\frac{2}{3}$. It is of great interest to trace the practical means by which this very exceptional problem of credit was solved.

The maintenance of the value of the bill of exchange, the current credit device in international transactions, is no different in principle from the maintenance of the value of the check, the current credit device in domestic transactions. They must be paid on sight if demand bills, or at maturity if time bills. Postponement of payment changes immediate redemption (which is necessary to keep at par any demand obligation) to ultimate redemption (which carries with it a discount, varying with the time and certainty of future payment). The place of the movement of gold among the various factors in the international settlement may be easily indicated. The levels of exchange, in brief, may be influenced by the following causes:

Factors
affecting
price of
exchange.

1. The balance in the movement of goods and securities.
2. The flow of interest on foreign investments, payment for freights, expenses of travellers, etc.
3. Creation of credits abroad.
4. Gold shipments.
5. The depreciation of the currency in the country on whom the bill is drawn, and in which the bill will be paid.

The need of imports into England was so urgent, and the volume so enormous, that a stable means of international payment was imperative—stabilized, that is, by the least possible exportation of gold, which at home was necessary for the maintenance of bank reserves and the gold standard in all domestic dealings. Here was a situation requiring skill and a steady hand. The task was undertaken by the English Government, working with the Bank of England.

Stabilizing
exchange.

The general policy adopted aimed at a serious reduction of all unnecessary imports of goods and an encouragement of all possible exports of English manufactures. All in all, in view of the transfer of vast productive power to making war supplies at home, the shortage in shipping tonnage, the risks of maritime transportation, the high rates of insurance, the maintenance of British exports at a high level comparable in values (of course, at much higher prices) with those of peace times is something quite remarkable.¹ (See Chart III.) The requisitioning of merchant shipping by the government cut off freight receipts, and the cessation of travel from other countries removed a considerable credit item in the international account. There remain only the matters of foreign securities and the creation of credits abroad, chiefly in the United States, which might come into play before the final recourse to shipments of gold.

Ever since the Civil War England had been purchasing many of our municipal, State, railway, and other securities, holding by 1914 amounts variously estimated from \$3,000,000,000 to \$4,000,000,000. As soon as our stock

¹ ENGLISH EXPORTS
(000,000 omitted)

	1914	1915	1916
Exports to allied and English possessions.....	£290.7	£299.8	£388.6
Exports to neutrals.....	231.3	184.0	215.4
Total.....	£522.0	£483.8	£604.0

The total exports to the United States (plus re-exports) are:

Average of 1909-1913.....	£60.3
Average of 1914.....	65.0
Average of 1915.....	56.5
Average of 1916.....	64.5

The excess of total imports over exports was in 1914, £174.4; 1915, £367.9; and 1916, £345.

exchanges were opened in November, 1914, and when at about the same time our exports began to move in large volume to Europe—and even before—England began to meet her international debts by the proceeds from the sale of American and other securities. Of the railway securities alone held abroad of a market value of \$1,751,437,912¹, January 31, 1915, there were returned to us by January 31, 1917, \$1,215,437,266 (market value), which came mainly through British hands. In all, probably about \$2,200,000,000 of American securities were sent home. The impulse of individuals to realize on foreign securities, however, was not alone sufficient to overcome the international balance against England and to stabilize the rate of exchange.

Return of
American
securities.

As the main problem was concerned with American exchange, more drastic measures were undertaken on the initiative of the British Government. On December 13, 1915, the chancellor of the exchequer stated in the House of Commons that the government were desirous of purchasing outright or of borrowing certain American and Canadian dollar securities held by English investors, in order to use them for the purpose of steadying the American exchange. A long list of such securities was published by the Treasury, to which additions were made from time to time. "Preferably, holders of selected securities were invited to sell such securities to the Treasury at the current market price, the purchase money to be paid in five-year 5 per cent exchequer bonds at par. Alternatively, holders who did not wish to sell outright were invited to pledge selected securities with the Treasury for a period of two years from

Mobilization
of American
securities in
England.

¹ Computation of L. F. Loree, president of the Delaware and Hudson Company, on market values of August 2, 1915.

the date of transfer, the lender to receive all interests and dividends paid in respect of them, and also, by way of consideration for the loan, a commission at the rate of 10s. per cent. per annum on the face value of the securities. The government reserved the right to sell borrowed securities under certain conditions.”¹ Voluntary offerings, however, under these terms were not sufficient to meet the abnormal situation, although the amounts sold or lent to the Treasury were very large.² To insure a steady inflow of the desired securities still further pressure had to be supplied. Accordingly, “the chancellor of the exchequer on 27th June, 1916, moved a new clause to the finance bill, authorizing the charge of an additional income tax of 2s. in the pound on income derived from securities which the Treasury are willing to purchase.” This had the desired effect. Without doubt, this plan has been the most effective of all the means employed to steady the rate of American exchange on London. It was followed up August 12, 1916, by a request from the Treasury for the loan (not the sale) of various Argentine, Canadian, Danish, Dutch, and Swedish securities, on favorable terms to holders, in order to regulate other foreign exchange.

The requisitioning of American securities in order to secure credits to cover purchases of war supplies in our markets, although important, was only one of the means employed. Investors in the United States, noting the unprecedented increase of war debts in Europe, were distrustful of European securities. In the face of this disposition, and influenced by the comparative soundness of English credit, the American markets were nevertheless gradually in-

English
borrow from
United
States.

¹ See A. W. Kirkaldy, *Labour, Finance, and the War* (1916), p. 292.

² In August, 1915, Mr. Clare is reported in the press to have estimated that the sales of American securities had aggregated about \$500,000,000.

duced to subscribe to English loans. Loans based solely on the credit of the government were less popular than those supported by collateral made up of the securities of neutral countries. Although only one-half of the Anglo-French loan of \$500,000,000 in the United States in October, 1915, netting investors about $5\frac{1}{2}$ per cent, was the share of Great Britain, the whole was really based on her credit. In August, 1916, a collateral loan of \$250,000,000 was secured through the British fiscal agents in New York, yielding $5\frac{1}{2}$ per cent. A second British loan for \$300,000,000 through the same agents was placed in October, 1916, at $5\frac{3}{4}$ per cent to the buyers of the three-year notes, and 5.85 per cent to the buyers of the five-year maturities. A third loan of \$250,000,000 was in the same way put out on February 1, 1917, to yield 6 per cent. These several British loans in the United States thus totalled to that date \$1,050,000,000,¹ the proceeds of which were used to pay for supplies bought in our markets, and to that extent saved the need of drawing bills on London and lowering their price. In addition, British bankers negotiated credits with American banks on their own account, thus increasing British means of payment for purchases in this country.

The final resort in settling an international account which has been seriously disturbed sooner or later comes to a shipment of gold; but only after all other devices have failed. The United States did not need the gold in addition to its existing stock, and the percentage of reserves to demand liabilities of the Bank of England were abnormally low. There would, therefore, be no reason but necessity for a movement of gold away from London. That necessity existed in the imperative demand to prevent the depreciation of the medium of payment for

Gold
shipments
necessary to
maintenance
of English
exchange.

¹ For further details, see *infra*, Chap. VI, § 8, and Appendix IV., D.

English imports. Postponement of cash payments when called for as a test destroys immediate redemption and entails depreciation. In normal dealings the changes in the prices of exchange due to the swing of exports and imports of goods (together with the other items in the account) can go no farther than the shipping-point for gold; which is to say, the test of immediate redemption in gold of the excess of bills. Should the English give up the attempt at redemption of sterling bills and accept the policy of depreciation by suspension of gold payments as in Germany and France? On the contrary, they fought against a depreciation of the standard at home and also in international trade. It is to be noted, however, that there must be a different "shipping-point" for gold in times of war from those of peace, due to a rise in the charges for freight and insurance entering into the cost of transporting gold. Therefore, gold shipments were not expected to bring about the same fixed limit below par as in days of peace. The actual quotations for exchange on New York were at certain dates as follows:

July, 1914.....	\$4.88½	Sept. 15-Oct. 15, 1915. \$4.68-4.72½	
July, 1915.....	4.77½-4.76 ⅝	Nov. 1, 1915.....	4.62½
Aug. 26, 1915.....	4.64½	Nov. 30, 1915.....	4.70½
Aug. 31, 1915.....	4.59¾	Dec. 13, 1915.....	4.77
Sept. 1, 1915.....	4.49	Jan. 6-July, 1916.....	4.66-4.77

Thus, raised from the lowest point, September 1, 1915, by the placing of loans in the United States, and by the persistent shipping of gold to New York, sterling bills have been later maintained at about \$4.76. It is not now possible to state exactly how much gold has moved from London to New York. We know that Great Britain can control \$300,000,000 of the new production of gold each year. The Bank of England alone reported that, in one period of nine months ending March 31, 1916, the total withdrawals of gold for

Restoration
of exchange.

export exceeded \$350,000,000. Since then gold receipts at New York have been very heavy and continuous. The stabilization of foreign exchange with the United States, by far the largest exporter to England and to the Allies, belongs to the period in which the study of the accounts of the Bank of England shows that the credit system had reached a war adjustment about the end of 1915. (See Chart II.)

As gold payments were not suspended by the English, there is no reason in this connection for discussing the effect of a depreciation of the currency on British exchange.¹ The exchanges on those countries which had suspended specie payments, on the other hand, were necessarily affected not only by the usual elements in the account, but also by the depreciation of the currency in which the bills were to be settled. The separation of the effect of the depreciation from special causes, however, such as the shifting of trade, loss of traveller's expenditure, and the like, cannot be definitely made. The percentage of discount on the bills of these countries, as shown in the neutral market of New York,² was:

	May 12, 1916	November 2, 1917
Reichsmarks.....	— 15 $\frac{3}{4}$%	.....
Francs.....	— 12 $\frac{1}{4}$ %	— 10.9%
Austrian crowns.....	— 33 $\frac{7}{8}$%	.....
Lire.....	— 16 $\frac{1}{8}$ %	— 54%
Roubles.....	— 40%	— 73%

¹ It is quite unnecessary to suppose, as do some English economists, that prices in the United States have been raised by the imports of British gold. The prices of war supplies, breadstuffs, cotton, and the like have risen for causes peculiar to the supply of or demand for the articles, together with the extraordinary increase in wages, coal, and materials, which are independent of the gold supply. Moreover, bank credits have not been inflated. Cf. A. W. Kirkaldy, *Labour, Finance, and the War*, p. 261, and H. S. Foxwell, *The Insurance Record* (London), March 30, April 6, April 13, 1917.

² Cf. A. W. Kirkaldy, *Labour, Finance, and the War*, p. 258.

The exchanges with Holland, Denmark, Sweden, Norway, and Switzerland occupied an exceptional position, not only for special reasons affecting each, but especially because of their close geographical and trade relations with Germany. Drastic measures were taken by the Allies to prevent gold passing through these countries to Germany, even affecting shipments from the United States. Consequently, an adverse balance of trade could not be offset when less than the required amount of gold was moving. In the New York market this situation¹ was registered by a premium on bills, as follows:

	May 12, 1916	November 2, 1917
Scandinavian crowns.....	+ 16 $\frac{1}{2}$ %	+ 60%
Dutch guilders.....	+ 3 $\frac{3}{8}$ %	+ 13%
Spanish pesetas.....	+ 1 $\frac{1}{2}$ %	+ 22%

At this former date the higher charges for freight and insurance on gold² had an influence on the price of these bills, as well as the excess of exports to Great Britain. In January, 1916, Dutch exchange in London was at a discount of 13.2 per cent, but in May of that year Holland purchased £7,000,000 English treasury bills, which acted as an offset to English exports, and the exchanges rose to a discount of only 3 per cent, which covered the cost of sending gold. An anomalous situation arose in Sweden which led to measures (February, 1916) protecting it from being flooded with gold in order to prevent "inflation." Norway and Denmark, in which the State Bank notes were at a premium over gold, followed the same policy.³ Eng-

¹ *Ibid.*

² In May, 1916, the additional charges for freight and insurance of gold were: France, 1 $\frac{1}{8}$ per cent; Holland, 3; Italy, 1 $\frac{1}{4}$; Russia, 4 to 5; Spain, 2; Switzerland, 1. *Ibid.*, p. 257.

³ *Cf. infra*, Chap. VI, § 6.

lish bills on Sweden fell (April 26, 1916) to a discount of 19.1 per cent. More recently the stringency of regulation over the shipment of gold has removed the usual means of controlling the price of Scandinavian exchange, which has risen to an extreme quotation. That is, while imports from Sweden are received, but few exports sent, there are no means of settling exchange, if also gold cannot be shipped.

§ 9. Finally, we must reckon with the credit operations involved in the borrowings of the British Government on a scale so unparalleled that the past offers no precedents for our guidance. These borrowings, moreover—together with the vast quantum of war expenses raised by taxation—represent the diversion of goods and productive energy from normal, peaceful uses to the uses of war. That is, the credit operations here again arise from gigantic transactions in goods, which aim at providing supplies for immediate requirements in the army and navy in return for credit obligations promising repayment at short or long terms in the future. These public operations in credit differ in some forms, but not in principle, from private dealings in credit. What is transferred from lenders to the government is not money—except for balances and *pro forma* tests—but a means of purchasing power over goods. Even the government is necessarily provided with this effective means of payment for its war expenditure only through the machinery of the private industrial and banking organization of credit. No government can create credit, except on the basis of goods either present or in prospect, and through a confidence in the future certainty and efficiency of the nation's industry. Such must always be the basis for the

Government
borrows
purchasing
power over
goods.

credit of a borrowing government. In principle it differs in no way from the confidence accorded to the credit of an industrial concern.

For the first three years of the war (August 1, 1914, to July 28, 1917) the total British debt is as follows (in millions):

Total expenditure.....	\$25,680
Raised by revenue.....	6,214
Net borrowings.....	19,550
Loans to Dominions.....	\$730
Loans to Allies ¹	5,125
	<hr/> 5,855
Net war debt.....	\$13,695
Pre-war debt.....	3,535
	<hr/>
Total burden of debt to date.....	\$17,230
Annual charge at 5 per cent.....	861

This burden is to be weighed in relation to an annual British income of about \$12,000,000,000 and annual savings of nearly \$2,000,000,000.²

The old question as to the proportion of taxation to loans has been very earnestly discussed. Out of discussion, and the experience of the belligerents in this war, it is clear that no fixed ratio can be arrived at. In the case of Great Britain, it was necessary to preserve the vitality of industries capable of providing exports to help offset the heavy imports. Indeed, the reduction of unnecessary consumption of imports, together with the encouragement of exports, was the only effective means in the long run to keep the foreign exchanges within reasonable limits and protect domestic gold reserves. Thus, too, heavy

¹ For the financial year 1917-1918 loans to Dominions and to Allies are estimated at \$2,000,000,000. See, for above table, London *Economist*, August 4, 1917, p. 150.

² The estimates of the wealth of a nation are of doubtful worth. That of Great Britain is variously estimated from \$50,000,000,000 (Mallet) to \$65,000,000,000 (Helfferich) and \$80,000,000,000 (Giffen).

taxes on industries (such as cotton goods) working for foreign consumption would be hurtful to other and important policies. While war taxes must, as a minimum, provide an income sufficient to carry fully the interest charge on the war debt, if only to protect the credit of the state, as much more should be levied by taxes as the people are willing to pay under the existing state of public opinion, and as much as can be taken without impairing the productive activity of the various industries. What this "revenue-point" may be will vary with circumstances, the open markets, the fortunes of war, and with the different industries. It can be arrived at only by experience, discrimination, and good judgment. Since it is inevitable in a war of untold expenditures that enormous loans must be floated, it goes without saying that the whole margin of savings and profits cannot be so removed by taxation that funds are not left for subscriptions to loans. At the very beginning of a war it is not likely that the public will have realized the cost of the undertaking, nor yet prepared for excessive sacrifices. Hence, in the first year greater dependence upon loans than on taxes is almost always the experience. Later, taxes can be heavily increased with the hearty support of the taxpayers. Excessive reliance on loans, however, must in general be regarded as a sign of weakness, either because increased taxes are impossible or because the public are unwilling to be taxed.

From the table above it can be seen that out of a total English war expenditure of over \$25,000,000,000 some \$6,214,000,000 have been raised by revenue, or about one-fourth. But in the first year taxes were only slightly increased. In 1916-1917, however, we have the remarkable showing of taxes bringing in over \$2,500,000,000, or more than the annual savings per annum before the war. Evi-

English
raised
one-fourth
by taxes.

dently the appeal to economy as well as the extent of the sources of taxation have responded to the need, without impairing the power to float loans to unheard-of totals. Since Great Britain has not depended on protective taxes for revenue, it is profitable to study the

actual income from the various forms of taxation, in contrast with the fiscal year ending March 31, 1914, from the following table¹ prepared by Professor Seligman (in millions):

	1913-1914	1914-1915	1915-1916	1916-1917
Customs.....	£35.6	£38.6	£59.6	£70.5
Excise.....	39.6	42.4	61.2	56.4
Estate duties.....	27.2	28.4	31.0	31.2
Stamps.....	9.9	7.6	6.8	7.9
Income tax.....	47.2	69.4	128.4	205.0
Excess profits.....	....	....	2	139.9
Land house and land value..	3.5	2.9	2.9	3.1
All taxes.....	£163.0	£189.3	£290.1	£514.0
Non-tax revenue ²	35.3	37.4	46.6	59.4
Total.....	£198.3	£226.7	£336.7	£573.4
Total expenditure.....	197.5	557.0	1,559.0	2,198.0
War expenditure.....	....	358.0	1,360.0	2,000.0
Increased taxes.....	....	25.0	127.0 (9.3%)	350.0 (17%)
Increased taxes and non-tax revenue.....	....	27.0	138.0 (10%)	375.0 (18½%)

It will thus be seen that increased war revenues have come mainly from the tax on incomes and excess profits, which together yielded \$1,725,000,000 in 1916-1917.

Leaving the question of taxation, and returning to the credit operations of the government in borrowing, we find employed a very large variety of forms of indebtedness both of long and short terms. These credit dealings

¹ Cf. *War Finance Primer*, National Bank of Commerce, p. 111.

² Includes post-office, telephone, telegraph, crown lands, Suez Canal shares, etc.

on behalf of the state have in common with private credit operations the element of futurity and a basis of goods; but the former differ from the latter mainly in being drawn for longer terms in the future, and, in the case of funded debt, in being based on the production of goods in the more or less remote future. If this fixed belief in the assured production of future goods did not exist, there would be no confidence in the future revenue of the state, and the credit of the government would cease to exist. The willingness to subscribe to a national bond presupposes confidence in the ability of the state to find goods in the future from which it can take enough to pay the annual charge and gradually to reduce the principal.

Government
credit
depends on
future
productivity.

The scarcity of commercial bills early led the English banks to invest idle funds in short-time treasury bills. In the first stages of the war there was thus a strong temptation to rely on this form of short-term debt; for in times of peace short-term government obligations were regarded as a desirable secondary reserve for banks easily convertible into cash. On the vast scale on which they have been resorted to in this war, however, it is obvious that they cannot be paid off at maturity from incoming revenue, but must be exchanged for other forms of debt. Hence, they ceased to have to the same degree as formerly the character of a desirable secondary reserve.¹ They had the advantage that they generally carried a low rate of interest, but they were constantly falling due,

Treasury
bills.

Different
forms of
debt.

¹ This was undoubtedly one of the reasons why the Federal Reserve Board of the United States advised its member banks not to load themselves up with large amounts of English treasury bills as collateral for loans to London in December, 1916. It did not imply opposition to investments in proper form; but bank resources must be kept liquid. A distinction must be made between commercial and investment banking.

¹ *Statist*, August 18, 1917.

which will allow refunding on a very large scale soon after the close of the war, and permit a reduction of the annual charge.

As the war progressed, however, the permanent debt grew. From short-time treasury bills to exchequer bonds running only a few years the step to long-term funded debt was inevitable sooner or later. The First War Loan, paying $3\frac{1}{2}$ per cent, was offered in denominations of £100 to £1,000 to the amount of \$1,750,000,000 in December, 1914. The price was 95, and the last instalments were paid in April 26, 1915. In placing this loan, maturing in 1925-1928, the accounts of the Bank of England show no pressure indicating a resort to borrowing until March and April, 1915. (See Chart II.)

First War
Loan.

The Second War Loan, paying $4\frac{1}{2}$ per cent, maturing in 1925-1945, was offered at 100, very soon after the First Loan. To appeal to small lenders denominations below £100 could be had through the post-offices; and either stock inscribed on the books of the Treasury or coupon bonds could be obtained.

Second War
Loan.

As agreed in issuing the First Loan, the $3\frac{1}{2}$ per cents could be converted into the $4\frac{1}{2}$ per cents, but only on the payment of a 5 per cent bonus; while the $2\frac{1}{2}$ per cent consols could be converted at the rate of 75 of the old for 50 of the new securities, and the $2\frac{1}{2}$ per cent annuities at the rate of 78 to 50. The payments for the Second Loan began July 20, 1915, and ended October 26, 1915. It will be noticed (in Chart II) that the resort to banks for carrying the loan was unmistakable, as shown in the elevation of the line of discounts during this period. In the case of the First as well as of the later loans, it was announced that the Bank of England would advance to subscribers to the loan to the full value of

the bond for a period of three years at a rate of interest 1 per cent less than bank rate at the time. We have

here the explanation of the exceptional disturbances in the line of discounts in 1915.

Effect on
credit.

(See Chart II.) The additional load of pre-moratorium bills, together with the loans on government securities, sufficiently account for the continued higher level of bank-discounts—even after the immediate flurry of placing the loans had subsided—at over \$500,000,000, as against a normal level of half that sum before the war.

In contrast to the banking effects of the first two war loans those of the Third War Loan early in 1917 are very striking. This greatest of all the borrowings was offered

Third War
Loan.

in two forms: (1) A 5 per cent bond, maturing in 1929–1947, sold at 95, but subject to the income tax, was set over against (2) a 4 per cent bond, maturing in 1929–1942, sold at 100, but exempt from the income tax (although not from the super-tax).¹ Both descriptions were free of all English taxes if held by foreigners. Denominations were from £50 to £5,000. The payments on subscriptions began at the end of February and ended May 30, 1917.

The one striking fluctuation in the lines of deposits and discounts at the beginning of 1917 was connected with this great \$5,000,000,000 loan. In anticipation, the govern-

Effect of
great loan
of 1917 on
credit.

ment stopped the sale of short-term treasury bills, in which floating funds had been largely invested; stocks of various kinds, and even holdings of treasury bills, had been sold to obtain cash with which to pay for the new loan; so

¹ The $4\frac{1}{2}$ per cents were convertible in (1) at £105 5s. 3d. to £100, and into (2) at par. The same rates applied to the conversion of the 5 per cent exchequer bonds of October, 1919 and 1921; to those of December, 1920, and to the 6 per cents of February, 1920.

that we have the unwonted spectacle of an accumulation of private deposits at the banks—especially at the Bank of England (see Chart II)—to “a bloated total,” ready to be turned over to the government by subscribers to the new loan. In this connection the most striking incident was the remarkable drop in the discounts of the bank to an unprecedented low figure. In floating this the greatest of all government loans, when one might have expected an exceptional demand for discounts to aid subscriptions to the bonds, leading to an inflation of credit, we find just the reverse—an unusual reduction in discounts at the very time of a great advance in private deposits. The lists were closed February 16, 1917, and, interestingly enough, it was only afterward that, in the process of transferring the large funds involved in paying for the loan, resort was had to the banks for discounts, and then only for about a month. The discounts dropped by the end of March, although instalments were yet due until May 30. Thus, in the case of the largest loan, there was no expansion of credit such as might have been feared.

In view of the accumulation of this vast debt in three years of war, with the end not yet in sight, the mind at once questions the future. Of the ability of the English to carry this colossal war debt there can be little doubt. The willingness to pay over \$2,500,000,000 in taxes per year is a factor of great significance affecting the credit of the country and the standing of its securities. It is a policy that stands out in bold contrast to that of Germany, which has adopted the principle of taxing little (evidently having counted on victory and large indemnities) and funding a great debt in long-term securities. Obviously, Great Britain has in mind no indemnities as a means of

Ability to
carry the
burden of
debt.

lightening her burden of debt. If we are disposed to measure British credit, or borrowing power, by her ability to produce goods in the future, to hold her own in the competition of international markets, it must be clear that the exigencies of war have unmistakably awakened and stimulated her productive efficiency—wholly apart, of course, from the sickening loss of life and the patent destruction of capital. All in all, instead of material considerations as to economic resources, it is the spirit in which she is likely to take up the work of the future—as to which there need be entertained little doubt—on which most emphasis should be placed.

CHAPTER IV

FRENCH MONEY AND CREDIT

Organization of credit—Bank of France the centre—Private banks—Nexus between notes and loans—Function of bank reserves—Political situation before the war—Balkan wars—Closing of stock exchanges—Production crippled—Moratorium—Little use of checks—Relief to the paroxysm in credit by the Bank of France—Aid to the bourse—Suspension of specie payments—Advances to the state—Soundness of the credit fabric—Fiscal and monetary functions confused—Inflation and depreciation of notes—Rise of prices—Foreign exchange—Fiscal problem very difficult—Forms of debt—Extent of war debt—Proportion of taxes to loans—Ability to carry the burden.

§ 1. It is not without purpose that we have first taken up a study of the workings of the English credit system, which is most like our own in mechanism and development, and next turn to that of France, which contrasts strongly with the English, and which, moreover, typifies a point of view regarding money and credit that is distinctly Continental, as opposed to that of England and the United States. Much is to be gained by a comparative study, especially in a time of great stress. It is the inevitable consequence of such a gigantic cataclysm as the European War that it should put to a critical test long-established institutions. Probably no other great bank has won a higher repute for good management and skill over a long period of years than the Bank of France; and yet it is quite possible that this comparative study of the credit systems of the belligerents during an exceptional war emergency may disclose some errors of general policy which shall

Gains from a comparative study.

oblige us to revise our past appraisals of the relative value of important features in credit systems, and of the methods of the banks through which their operations have been conducted. In the case of France this question must be raised regarding the time-honored and close relationship existing between the granting of credit and the issue of the nation's paper money, between the fiscal borrowing by the state and the consequent increase of its circulation.

The organization of credit in France has been widely heralded as a model. As is well known, it centres around the Bank of France, a great central bank, supplied by private capital, but under close govern-
Bank of
France. mental control, and to which the institutions of credit and the business public look for leadership. It is the agent of the state in collecting and disbursing funds, and from it the government would expect to borrow large sums in any emergency of national import. It acts not primarily for profit, but to provide a low and steady rate of interest and to watch over the credit interests of the whole country. It is a bank of the primitive type, holding only one common reserve for both its deposits and notes without preference.¹ It can issue notes only against cash or statutory loans or discounts, so that every note is covered by an equivalent in cash or assets.²

Subordinate to the Bank of France, however, are the large private banks which directly serve the largest part

¹ The bank is managed by a governor and two subgovernors, appointed by the president on the nomination of the minister of finance, and aided by fifteen regents and three censors, who are elected by the two hundred largest shareholders, and whose action is subject to a veto by the governor. These regents and censors are chosen from the commercial and industrial classes, and decide upon the rate of discount.

² Cf. *infra*, p. 167, n. 2.

of the business public asking for loans. The form of paper discounted for merchants is usually a bill of exchange, drawn by the seller of goods on the buyer and accepted by the latter. As elsewhere in Europe, bills drawn on banks and institutions of credit and accepted by them provide paper of a high grade for discount by the private banks. Paper based on collateral securities of a satisfactory kind provide the borrowers with advances, but ordinarily at a rate perhaps 1 per cent higher than paper based on the sale of goods; because securities being less salable in time of emergency make collateral paper less liquid than that on short maturities constantly provided with a means of payment by the turnover of the goods. Moreover, on a bill which is acceptable for rediscount by the Bank of France the maximum rate charged is the official rate of the Bank of France; but a loan on securities not being thus acceptable cannot be used at the Bank and is charged a higher rate. In all loans the private banks—as well as the Bank of France—put especial emphasis upon the quality of the bills and paper presented. If these are of high quality, cash can be had at any time by rediscounting their holdings of paper at the central source of money, the Bank of France. Good commercial paper is regarded by the private banks as the best secondary resource practically equivalent to cash. The ability instantly to obtain cash reserves thus depends on the kind of paper discounted, and has the important practical result of allowing the large private banks to carry very small reserves, in fact only 8 to 10 per cent as till money. Consequently, it happens that about 70 per cent of the bills discounted at the Bank of France come from these private banks. The private banks are not restricted in making advances on any kind of securities (even mining stocks) which they think good; they carry securities

for sale to the public; they may pay interest on deposits, and may loan on paper without three signatures—in which respects their business differs from that of the Bank of France.

Since the exclusive right of issue gave the Bank of France a special advantage in a country where payments are chiefly made by passing money, other banks did not develop fully until after the Franco-Prussian War.¹ In the same period that witnessed the industrial upbuilding of Germany, they flourished and began to sell securities extensively, and in building up a vast discount business they also increased their deposits. It was through these banks that the surplus capital of France was invested abroad. As elsewhere in Europe, the private banks were sometimes directly engaged in such enterprises as constructing the sea canal of Corinth or building the Serbian railroad (which was carried through by the Comptoir d'Escompte). It was between 1859 and 1865 that the large credit institutions of to-day, such as the Crédit Lyonnais, Société Générale, and the Crédit Industriel et Commercial were founded. The Comptoir d'Escompte was founded earlier. It was the existence of these banks that induced the public to open running accounts and to make deposits. They covered France with a network of competitive branches, and gathered in capital for investment. They issued circulars on business conditions, state loans and budgets; reports on industrial enterprises, food-stuffs, and agriculture; and sent out technical experts to report on undertakings.

By 1885 the discounts and deposits of the four banks above mentioned began to be important. In twenty-four years their sight deposits and running credits in-

¹ The general joint-stock law was passed in 1867.

Nature of
business
done by
private
banks.

creased sixfold.¹ They preferred to discount short-term loans, and were indefatigable in putting the sight deposits intrusted to them into suitable investments. They established branches in foreign countries and thus assisted in the placing of idle French capital in foreign securities to more than \$6,000,000,000, or as much as the heavy national debt. It was this situation which made France a creditor nation, kept the rate of foreign exchange favorable, and aided the Bank of France in maintaining its traditionally large gold reserve.

Apart from the large private credit institutions, which resemble the English joint-stock banks, there are some 2,700 or more local and provincial banks, carrying on the work of discounts, loan, investment, as well as serving in other agencies for limited constitu-
Provincial
banks.
encies. They suffered from the energetic competition of the large credit companies, until in 1905 about 325 of them formed a union under the name of the Société Centrale des Banques de Province for self-protection, and to centralize provincial operations in Paris in order to obtain a share in the large dealings in securities.

It is well known that—unlike England and the United States—France follows the monetary habits of the Continent in making payments by the passage of actual money (usually Bank of France notes) and not by checks drawn upon deposit accounts at some bank. Few checks being used, the clearing-house plays a very insignificant rôle. Therefore, when a customer of the Bank of France gets a loan, its immediate effect does not, as with

Volume of
credit
indicated in
the note-
issues.

¹ The failures of the Crédit Mobilier (1867), the Union Générale (1882), the Comptoir d'Escompte (1889), and the Société des Dépôts et Comptes Courants (1891) indicate that independent banking in France has not been wholly free from speculation and has met with the inevitable mishaps. From 1876 to 1882 the new issues of securities which amounted to 9,055,500,000 francs point a moral.

us, appear in a deposit account, but usually in the item of note-issues. Indeed, the demand liability which discloses the extent of credit operations by the Bank of France is to be found mainly in the amount of the notes issued. That is, if we wish to know whether the credit of the general public has been expanded or not, we must study the note liability which is directly responsive to increasing loans. When the customer, above all, is the government of France—which is certain to borrow heavily from the Bank in a great national emergency—loans to the state inevitably result in large issues of bank-notes, which eventually find their way into bank reserves or into the hands of the public.

As more goods and securities are bought and sold more bills and forms of credit arise to be discounted at the banks; as transactions increase, more credit is *pro tanto* demanded. Since the need of the borrower in France for a means of payment is bank-notes (instead of the deposit-currency, as with us), then, when there are more transactions in goods or securities and more loans are wanted, more notes of the Bank of France are called for, either through the intermediary of a private bank or directly from the central bank itself. The point of chief importance unfortunately is that the expansion of credit carries with it the expansion of the note-issues of the Bank of France. So long as these notes expand only in proportion to actual transactions there is a legitimate growth in the circulation and no inflation. If, however, for any reason a demand should arise for loans—such, for instance, as a request in time of war for exceptionally large advances by the Bank to the state—there would result an issue of notes, not based on the need of a means of payment for exchanging goods, which could only be described as in-

In France
loans lead to
note-issues.

flation—whatever its consequences might be. Thus the problems of money and credit are closely interwoven in France.

The principles of credit, indeed, receive most clear and interesting illustration in the normal workings of the French system of credit. It is held by some writers that credit depends directly upon the amount of money in circulation or in bank reserves. Circulation dependent on discounts. The whole operation of credit in France seems to show that exactly the reverse is true. The amount of the circulation appears to be dependent roughly on the amount of discounts, that is, upon credit. In proportion as goods are produced and exchanged are they coined, as needed, into means of payment—which in that country are mainly Bank of France notes, apart from a stratum of gold and silver in the hands of the public and in the reserves of the Bank of France. The almost invariable order of events in these normal conditions is this: the production and exchange of goods; the bills drawn arising from their sale; the discounting of these bills; and finally, as needed, the issue of notes (or sometimes the payment of coin). This idea is impersonally expressed by the governor of the *Crédit Lyonnais*:¹

The Bank of France discounts bills in every part of the country, and it gives notes, gold, and silver in the proportions that they are wanted in every part of the country. It is the public itself which indicates the distribution [and, if I may interpolate, also the amount] of the money in France by presenting bills for discount and by asking the Bank of France for the kinds of money it needs, and turning in the kind it does not need.

¹ *National Monetary Commission*, No. 405, p. 243. This point of view is supported by the governor of the Bank of France, who said: "It is the bills presented for discount and the requests for loans which regulate automatically the movements of issue." *Ibid.*, p. 213.

Under such a system as this the primary function of a metallic reserve is not to determine the quantity of credit. As the volume of trade increases more loans are needed, more credit is granted, and then the authorities of the bank, thus called upon to issue a gradually increasing demand liability in the form of notes, see to it that there is accumulated out of the existing gold stock of the world an amount of reserves, not fixed by law but sufficient to insure the stability and redemption of their credit operations in cash whenever demanded. It is essentially true that gold is supplied to support the volume of credit arising out of the needs of trade—whatever they may be; not, *vice versa*, that the quantity of reserves limits the amount of credit. The sets of forces lying behind the determination of the volume of credit to be granted, and those lying behind the accumulation of a gold reserve, are entirely different in kind. The volume of credit varies with the productive forces of the nation and with the volume of goods produced and exchanged, while the quantity of reserves is limited only by the world's stock of gold (which has been increasing at an unprecedented rate) and by the monetary habits of the constituency using the bank, together with the character of the assets carried as the basis of loans. It will be observed at once that entirely different considerations affect each of these items. The causal relation, if any, between them is not that usually given. If the volume of legitimate credit increases it causes the bank to gather the necessary gold reserves (or other forms of legal money allowed to be held). It does not seem to be correct to say, on the other hand, that as a general principle the volume of credit in France is limited by reserves, and that a rise or fall of reserves causes a rise or fall of loans. This statement is oblivious to the direct dependence of credit upon

Function of
cash
reserves.

the volume of transactions in goods and securities. To be sure, if at any moment in the dynamic swing of trade and credit the reserves do not accord with the safe or customary percentage of reserves to demand liabilities—a purely mechanical relation—attempts will be made to bring the two items into the proper relation. When sound and legitimate loans, due to an enlargement of trade, are offered to the banks in increasing sums, reserves which are deficient for the moment do not limit the expanding volume of credit, unless it be assumed wrongly that the world's stock of gold is running low. It is, therefore, necessary to conclude that the primary function of a great gold reserve like that of the Bank of France is to maintain immediate redemption of its demand liabilities in coin. Whenever it fails thus to function, the primary purpose of the reserve is lost. Immediate (not postponed or ultimate) redemption not only maintains the value of the notes on an equality with gold, but it thereby automatically regulates the quantity of notes in circulation according to the actual needs of the public as expressed by their own judgment in presenting notes for coin. As M. Pallain, governor of the Bank of France, expressed it:¹ “As long as this redemption is made without difficulty, there can never be an excess of notes in circulation.” It will be well to bear in mind this truth in our study of the workings of French credit during the war.

Reserve to
maintain
immediate
redemption.

§ 2. In the period just before the war, the political taint had poisoned both the military and financial status in France. In no sense was she prepared for such a titanic struggle as that in which she is now engaged, and yet she was not without warning. The complex and dis-

¹ *National Monetary Commission*, (1910), No. 405, p. 213.

heartening political situation was variously assignable to the increasing control of radicals and socialists, the lack of statesmen in Parliament, the rise of professional politicians, strikes and social unrest, syndicalism, and parliamentary demagoguery. German intrigue was obviously at work stirring up political animosities, labor antagonisms, anti-militarism, and subverting the efficiency not only of the army and navy but of the financial management of the country. Jaurès was led even to advocate the abolition of the army. In 1905 compulsory military service was reduced to two years. Meanwhile the rattling of the German scabbard began with the intrusion of Germany into Moroccan affairs in 1905, the conference at Algeciras in January, 1906, followed by a resuscitation of the difficulty in February, 1909, and culminating in the visit of the German gunboat *Panther* to Agadir, July 1, 1911, which brought Germany and France to the brink of war.¹ In 1912 France was convinced that war was coming, and when, in 1913, Germany increased her army by several corps and levied a special non-recurring tax, France reacted by returning to three years' military service (August 7, 1913). It should be noted, however, that the bullying of France on the west should not be allowed to

¹ As early as the Combes's administration, concessions in 1905 by the ministers of war and marine to the pacifists weakened the efficiency of the army and navy. The radicals being in the saddle in the Rouvier cabinet, and since the revelation of weakness in the Russian army in the defeat by Japan showed France's ally to be despised, Germany evidently believed she had found the opportunity to bully France and extend her territory by the threat of war. The arrangement by France and England of affairs in Morocco in 1904 was used as a pretext by Germany for saying that, as she had not been officially informed of its provisions, she would disregard them. Then began a German intrigue with the Sultan of Morocco, and March 31, 1905, the Kaiser visited the Sultan as "an independent sovereign" at Tangier. Germany called for an international conference on Moroccan affairs, which the compliant Rouvier, sacrificing Delcassé, agreed to at Algeciras, January, 1906, and in which twelve

conceal the truth that the events in the Balkans and the intention to keep Russia from interfering with the plan of *Mittleuropa* were the real reasons for these war preparations of 1913. Yet in spite of these obvious warnings, France was so poisoned within by German intrigue working upon corrupt public men, even at the head of the ministry of finance, that she had become anæmic in making due preparations for meeting perfectly obvious dangers to her existence. The story of Caillaux is well known. It seems to be symptomatic not only of German methods in France and Italy, but also in Russia, as disclosed by events in Petrograd even before the retirement of the Romanoffs. We now know that when the war broke out, either because of treason or inexplicable blindness, France had obsolete forts, no line of defense against a march through Belgium, little heavy artillery, insufficient ammunition, and virtually no ambulance system. She was rich, however, in a thrifty peasantry, in a national spirit, and in the gallant and chivalrous patriotism of the whole rank and file of her army.

German
intrigue in
France.

The financial situation was directly influenced by the political complications of Europe. France, by reason of its large investments in other countries, or in their securi-

powers, including the United States, participated. Germany was eliminated. Not content, Germany continued her intrigues in Morocco until war-clouds again appeared, followed by a reference in February, 1909, to The Hague Tribunal, which justified the French. In 1911, in the ministry of Caillaux, Germany, supported by the French anti-militarist party, raised the Moroccan question again in a threatening way. She declared that the French military expedition sent to Fez in 1911 had nullified the settlements of Algeciras and of The Hague. Thereupon she sent the gunboat *Panther* to Agadir, July 1, and demanded a part of Morocco. England supported France, and finally Germany gave up her claims on Morocco in return for the Cameroons, containing 230,000 square kilometres and 1,000,000 inhabitants. Cf. C. H. C. Wright, *A History of the Third French Republic* (1916), and for the pro-German view, E. D. Morel, *Morocco in Diplomacy* (1912).

ties, has always maintained the position of a creditor nation, to whom a balance of payments (although not always the commercial balance) is in her favor. Funds had been loaned in large amounts to Brazil, Argentina, and to other South American countries, as well as to Mexico. In addition, French bankers had granted large loans to governments and to various enterprises in the Balkans and southeastern Europe. On a large scale France had also floated loans for Russia.

France a
creditor
country.

In her rapid industrial expansion Germany had gone beyond the supply of her own capital and had borrowed largely even from France. In 1911, at the time of the Agadir incident, French capitalists were entirely warranted by the threats of war in calling in the large balances due to them in German banks. The conditions of credit were so ill-poised in Germany, due to over-expansion, that the withdrawals of French capital disturbed the equilibrium and nearly brought on a financial crisis. Without doubt it was the difficult credit situation which forced the German militarists to weaken and give up their claims on Morocco in exchange for the Cameroons.

The purpose of Germany to support Austria-Hungary in annexing Bosnia and Herzegovina in 1908 as against Russian influence in the Balkans, was disturbed by the outbreak of the First Balkan War in the fall of 1912. The League of the Balkan States, created by Venezelos against Turkey, and the victorious progress of their troops toward Constantinople made the German scheme of expansion to the Persian Gulf very precarious; hence the general dread of a European War which stopped the headway of the League at the London Conference of 1913 and blocked Serbia's way

The Balkan
wars.

to the Adriatic. When the Second Balkan War, beginning in the summer of 1913, brought the submission of Bulgaria to Greece and Serbia, supported by Rumania, the outcome was not at all to the liking of Germany and Austria-Hungary. In every financial centre there was a long-continued fear that a European war was inevitable. France itself was particularly hard hit by the two Balkan wars, because she had been financing the Balkan States, and at the end they were so exhausted that they were in no condition to repay their French creditors. Above all, the uncertainty and tension produced by the warlike attitude of Germany caused an anxiety which affected all financial markets, even in the United States. Thus France was already crippled in her credit before the European War began.

Moreover, corrupt politics and an on-creeping radicalism had been eating out the vitals of her financial safety at home. Quite irrespective of her ability to pay, the country was being bled by those who were steadily using the state—obeying an extreme socialistic theory—as a means of equalizing the distribution of wealth, and who were thereby as steadily increasing the burdens of taxation in order to extend what may be called “social” expenditures in behalf of the proletariat. The cost of such parental government had been growing so rapidly that the national income had lagged far behind the swelling expenditures, and the debt of the state had become the largest of any in the world. Her debt of \$6,347,540,000 before the war began was five times that of the German Empire, and nearly twice that of Great Britain, while the burden of taxation was ominously heavy. Nor could it be said that the huge debt was directly due to the abnormal war indemnity of \$1,000,000,000 imposed by Germany in

Radicalism
and
increasing
debt.

1870-1871; for it had risen to six times the amount of that indemnity. In the year before the war it seemed as if the searching for new sources of taxation could go little farther, and she had been obliged to increase her debt in order to cover the demands of her budget. No one of the belligerents was economically so unprepared as France, no one was so handicapped for entering upon a long and expensive war. It came upon the country after it had been suffering from two years of economic depression.

§ 3. Having in mind the characteristics of the organization of credit, and the situation in France immediately preceding the war, we are obviously interested to know how she weathered the storm.

The most sensitive market, and the one first to discount coming danger in its prices, is the stock exchange,¹ especially in a country like France, which dealt largely in foreign securities. Inasmuch as securities formed the collateral for advances by the banks on an enormous scale, the organization of French credit would be touched to the quick by the weakness of securities. Every one will understand how important it is for owners of securities to be able in an emergency when goods are unsalable to convert their holdings into cash. Even before the beginning of war the French markets for securities had become panicky. In Berlin what was coming was known as early as May, 1914. The critical condition of the markets in Berlin

French stock
exchange.

¹The official market, or bourse, is known as the Parquet, composed of *Agents de Change*, or stock-brokers, appointed by the government and under the control of the Ministry of Finance. The seventy brokers in Paris form an association and by ballot choose a syndical chamber, known as the *Syndicat des Agents de Change*. Securities not admitted on the official quotation list are dealt in outside the bourse in the *coulisse* (curb).

and Vienna brought on a veritable panic in Paris by July 23.¹ On July 25 there was a rush to sell securities, and on July 30 the coulisse was closed; although the parquet remained open, it was under strict supervision by the government. On that day not only the parquet but also the stock exchanges of London and New York were open; but before business on Friday, July 31, those of London and New York were closed. Although the parquet remained nominally open, it did very little business; and only when the government withdrew from Paris to Bordeaux was the bourse closed by the prefect of police on September 3, 1914.² It was again opened, only for cash transactions, December 7, 1914. The settlements for stock transactions due in July had to be postponed to the end of August and again to October. Securities were now unsalable even at panic prices. All credit obligations based on the movement or sale of securities were "frozen." Banks which had made advances on even the best securities could not make payment on demand deposits if their assets were not convertible into cash. Consequently, it was obviously impossible for the public to obtain by sales of securities the means of payment with which to meet maturing obligations. In fact, a vast amount of capital was locked up and made unavailable for normal purposes.

The severity of the crisis in securities can be appreciated by the statement that the total sum involved in loans for carrying them was estimated at \$120,000,000 for the parquet; \$40,000,000 for the coulisse; while contangos (charges for carrying forward securities whose buyers could not pay for them on settlement) outside the bourse showed that

Crisis in
securities.

¹ Cf. the chronology given on p. 79, *supra*.

² *L'Économiste Français*, September 12, 1914, p. 329.

banks and credit houses were involved for about \$160,000,000. The fall in prices had gone to 30 or 40 per cent. The decline in rentes, the favorite national bond, was unprecedented, those bearing 3 per cent dropping to 75 by the middle of August, 1914.

Credit obligations based on the production and exchange of goods were equally shaken by the sudden crisis. Credit had been given involving an obligation

Domestic
production
crippled.

on the part of the borrower to return a money equivalent of goods in the future, so that the ability to make that return depended on the continuance of the production and sale of goods. But on the day of mobilization, August 1, virtually every able-bodied man in France to the age of forty-seven was called to the colors. It took almost every man of that age from agriculture, and of course at once reduced the normal production of all industries.¹ For instance, of the 135 blast-furnaces in operation in 1913, only 116 were alight July 1, 1914, and of these about 50 were shut down. The silk industry, too, was at a standstill. The stoppage of operations affected all manufactures except those engaged in supplying war materials. Military needs absorbed practically all means of transportation by the railways.

The early invasion of Belgium and northeastern France by the Germans touched some of France's vital economic interests. Here was the heart of the textile industries. In Lille,² Cambrai, and Sedan were the chief woollen-

¹ Of the 18,000,000 persons engaged in industry, probably 3,000,000 were at the front; but the upheaval in production made it impossible to keep the remaining 15,000,000 employed as before. Amid the general economizing, of course, the trade in luxuries immediately fell off. By October, 1914, it was estimated that 2,000,000 workmen and 1,000,000 refugees were out of work, so that October 26 L'Office Central was opened in the Ministry of Labor to find employment for them. The numbers of women to be cared for created the largest and most difficult problem, requiring a heavy outlay by the state.

² The local bank of Verley, Decroix & Co. in Lille had widened out into twenty-seven branch offices in the Departments of Nord and Pas de Calais.

mills. Moreover, important metallurgic industries and her richest coal-fields, which had yielded 26,000,000 out of the country's total of 38,000,000 (metric) tons, or two-thirds of her total production of coal, were lost to France. Of course, the coal supply of Belgium was cut off. These facts explain why the labor question in the Welsh coal-mines was so vital to the coal production now needed to help out England's allies, France and Italy.¹ Again, the beet-sugar district of Belgium and France, including the Department of the Somme and reaching nearly to Paris, was occupied by the Germans. Such a blow to the production of goods, the very basis of credit, came upon France already weakened by two years of economic depression.

The torpidity of credit, caused by the inanimate condition of industry and commerce, was still further aggravated by the injection of the moratorium. It gave debtors an excuse for not paying creditors, and by locking up funds even made most payments impossible. On August 6, 1914 (revised August 9), a decree of the government was issued affecting bank deposits, by which depositors could withdraw 250 francs and, in addition, only 5 per cent of any surplus above that sum.² If the depositor could prove he needed Moratorium. the funds for paying wages or for raw materials, he could

¹ A new light, moreover, is thrown on the calculated violation of the neutrality of Belgium—apart from finding the easiest road to Paris—by the fact that the seizure of the coal-fields and gas-works of the French and Belgian districts enabled Germany, it is estimated, to increase her output of benzol from 120,000,000 to 200,000,000 gallons—one essential explanation of her ability to keep up the unprecedented supply of explosives for her heavy guns.

² The original decree was modified later, as follows:

August 29, allowing withdrawal of 250 francs, plus 20% of excess.

September 27, allowing withdrawal of 250 francs, plus 25% of excess.

November, allowing withdrawal of 1,000 francs, plus 40% of excess.

December, allowing withdrawal of 1,000 francs, plus 50% of excess.

Depositors in savings-banks were allowed to draw only 50 francs a fortnight. Cf. Appendix II, B.

withdraw the whole. The moratorium was extended to insurance contracts; payments on the new loan were relaxed, and bills drawn before July 31 were extended. On August 10 it was applied in general to all "civil, commercial, and administrative prescriptions and pre-emp-tions." By the end of October some pressure was put upon debtors (except those called to the colors and those in the invaded area) to clear up their indebtedness, and after December 1 the debtor could be called upon to show if he were evading payment. Renters were also given extensions, at the risk, of course, of reducing the ability of owners to meet the interest on real-estate obligations. By January, 1915, a number of important banks removed all restrictions upon the withdrawals by depositors, a measure tending to bring funds out of hoards.

At this distance the policy of a moratorium seems to have been unfortunate. Credit is kept sound, and its validity constantly tested, by the imperative necessity of

payment at maturity. A moratorium is the
**Evil of a
moratorium.** negation of credit. If it be said that the
paralysis of trade and the unsalability of se-
curities made payments of obligations at maturity im-
possible, and that the moratorium was necessary to save
men from failure, the obvious reply is that the temporary
crisis which stopped production and trade was the very
thing which then, if ever, required free discounting by
the banks. It is the necessary function of bank-credit
to rise to just such an emergency. If there had been no
moratorium there would have been a greater demand for
loans than was actually shown—and that was certainly
very serious. But even an exceptionally heavy creation
of temporary loans for such an emergency would have
furnished a means of payment for maturing obligations,
it would have unlocked capital, it would have worked

against hoarding, it would have been the one thing to hasten the inevitable recovery of trade and thereby have enabled the public soon to reduce its credit commitments. That is, the extension and free granting of credits reacts upon the critical situation and acts to reduce the very need of credit. The time-honored maxim that in a crisis the banks should lend freely has been proved by many an experience in many countries. A credit system is not functioning normally where a moratorium is felt to be necessary. It assumes that the borrower is not worthy of a legitimate loan and drives him, under a moratorium, to what is a refusal to pay, which is actual, if not legal, bankruptcy.

What is the end to be gained in an unexpected crisis? To enable debtors by credit to meet immediate obligations, and then to be given time to liquidate goods and securities without throwing masses of them on the market at a great sacrifice. The renewal of a loan, if the borrower still cannot pay at maturity is, to be sure, a disguised moratorium, but it is all the moratorium really needed, and it is confined to private adjustments. In our own country the banks, in the crushing panic of 1914, quite generally refused to push a hard-pressed borrower for nearly six months after the outbreak of the war, during the time when many goods and securities were unsalable. It never occurred to us to resort to a public moratorium.

Function of
credit in a
crisis.

There seems to be little doubt that in France at this time there was a large supply of free capital, but that the conditions then existing kept it unemployed. This was due somewhat to timidity, but largely to the moratorium. It resulted that large amounts of capital were withdrawn from industry at a critical moment. The restrictions on the withdrawal of bank deposits, moreover,

caused no little lack of confidence in bank deposits and their security. The inability to draw deposits freely put a premium on hoarding. In addition, the locking up of bank-balances forced the customer to seek funds, if possible, in other ways, and added to the pressure on the banks for discounts.

In general, however, the whole matter brings up again the worth of the Continental habit of making payments mainly by money and not by more economical methods such as the use of checks. At the bottom of

Notes versus checks.

the tendency to withdraw deposits was the desire to get notes or coin which could be hoarded. If other means of payment, such as checks, had been familiar to customers, they could have safely retained their funds in the banks and yet had them available at any moment without impairing the supporting reserves of the banks by calling for cash. Indeed, it is worth noting that out of the stress of this great war emergency serious attempts were made to introduce the check system into France. But the restriction on the withdrawal of bank deposits had unfortunately frightened the small depositor from using banks and caused a distrust of the check.

As early as 1859 the *Crédit Industriel et Commercial* was founded to introduce deposit accounts accompanied by the use of checks,¹ after the manner of English institutions.

Attempts to introduce checks.

Later other companies were founded in imitation;² but the confusion of investment with commercial banking and the allurements of speculation did not provide a good soil for the growth of the deposit-currency, which requires a confidence by

¹ The check was legalized and defined by the Act of June 14-20, 1865.

² The *Société Générale pour Favoriser le Développement du Commerce et de l'Industrie en France* was followed by the *Crédit Lyonnais* (1863) and two others in Lyons, and one in Marseilles (1865).

the public in the safety and liquidity of bank deposits largely based on seasoned experience. It must find its successful operation chiefly in well-established monetary habits, and not in the published willingness of special banks to prosper by introducing a means of attracting business, no matter how successful it may have been in other countries having different monetary habits.¹

The campaign recently started by the Bank of France to induce a more general use of checks rightly aims at educating the general public on the risk of loss in carrying bank-notes in the pocket; on the waste of capital in supporting a large circulation, which might be economized by using checks and by enabling debts and credit to the amount of hundreds of billions of francs to be offset against each other without the use of any but small balances in money; and on the methods by which checks should be paid only to the rightful owner. The fact that checks "crossed" by two parallel lines (*barrés transversales*) (which makes them negotiable only at a bank) can now be used in France to avoid risk in the mails, seems to show that the public do not enjoy our facility of getting checks cashed on identification, to the protection of both the drawer and the bank. The slight use of checks in France makes the old clearing-house (*Chambre de Compensation*, established in 1872) of little importance. Part of the work of a clearing-house is met by operations such as transfers through the Bank of France. On July 22, 1917, spurred on by the hoarding of both cash and bank-notes, and the fact that the old clearing-house had only

¹ Liesse assumes that the success of a check system depends on having a group of banks of deposit (*National Monetary Commission*, No. 522, p. 195); but France has these in a way. What France does not have is a willingness to make payments in some other way than by money. That implies a different attitude toward banks and less hoarding than now exists among the thrifty French people.

a restricted membership, a new *Chambre de Compensation* was established, with a membership of nearly all the important banks, and absorbing the recently formed *Caisse de Compensation*, created to meet the needs of British and American banks.¹

The early effects of the crisis showed themselves not only on the bourse and in the moratorium but also in the circulation. The metallic money disappeared in a trice; hoarding, which goes with the national characteristic thrift, was exaggerated by the outbreak of war. Even the small silver coins vanished. Of the coin paid out by the banks little returned to circulation.² The Bank of France gave out by the end of 1914 some 300,000,000 francs of gold, which went the way of all the coin. The advances made on securities, as well as the payments which began to be made by the government to contractors, seemed to have no effect on the circulation. The Bank of France early (August 5, 1914) suspended specie payments on its notes (as it did August 12, 1870) which were made legal tender (*cours forcé*), and issued in denominations of twenty and five francs. These notes seem to have been readily accepted.

The exceptional and unparalleled crisis in credit, taken in connection with existing monetary habits and the organization of credit in France, placed the whole respon-

¹ At this time, also, the status of the check has been strengthened by a law punishing any one who issues a check without funds to meet it, or who withdraws funds after issuing a check, with imprisonment for from two months to two years, and a fine of not less than one-quarter of the amount.

In a recent case, however, the buyer of goods, who, after paying for them by a check, found the goods not as agreed upon and stopped payment on the check, was upheld by the French court.

² In Avignon, a city of 40,000 inhabitants, a branch of a secondary bank paid out, from July 25 to August 1, about 3,000,000 francs of gold and 1,000,000 francs silver with little or no result on the circulation.

sibility for guidance and recovery on the management of the Bank of France. Both for the business public and the state it was the final source of relief.

§ 4. In this examination of the credit operations of the major nations during the most stupendous war of all history, we have, as already said, a rare chance for comparative study, and the opportunity to profit by the revelation of defects and advantages which experience may develop. The study will have failed of its purpose, however, if it does not early disclose that, while the forms and legal mechanism of credit by virtue of historical and racial characteristics differ in the different countries, the fundamental principles of credit are nevertheless the same, irrespective of the external forms in which they work. Indeed, the inevitable methods of relief for paroxysms of credit are almost monotonously the same everywhere. In France they have to do with efforts to restore the salability of securities, the amelioration of the moratorium, the restoration of liquidity to banking assets, and—as the chief means of this end—finally, a reliance on the Bank of France for discounts in order that engagements may be met by a means of payment acceptable to the monetary habits of the people. These habits are such that this means of payment must come, not as in England from loans at the banking department of the Bank of England which led to the use of checks drawn on deposit accounts, but loans from banks, or from the Bank of France itself, which resulted in the issue of Bank of France notes. Although the practical means are different, the end is the same. To discount freely comes to be the final efficient remedy. For the banks themselves it is self-preservation, bringing with it, as it always does

Relief for
paroxysm of
credit in
France.

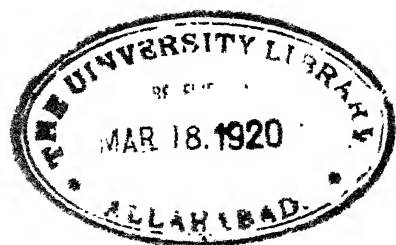
in a crisis, more or less loosening of the rigidity in making payments.

We are now led to consider the operations of the great central institution of credit, the Bank of France, in what was without doubt the greatest emergency in its whole history. Would it be able to liquefy the frozen assets, start the circulatory exchange of goods, allow producers to obtain capital, enable a dislocated industry under new adjustments again to turn out goods which would form a basis for normal credit operations, help to bring about the salability of securities, and, in addition, to meet the prodigious demands certain to be made upon it for advances to the state at a time when loans and taxes could not be immediately relied upon? Could this be done without undue strain on its note-issuing power, which would be inevitably expanded as the demands for credit increased? The responsibility laid upon it was a heavy one.

That exceptional demands for discounts would be made on the Bank even before the actual outbreak of hostilities goes without saying. In the six days from July 27 to August 1, 1914, the commercial paper discounted increased from \$316,000,000 to \$608,000,000. In the first days of August the tenseness of the situation, in a country where the rate of interest at its central bank had been kept at about 3 per cent for long periods, may be shown by the fact that the Bank, in order to protect itself, had to raise its discount rate to 6 per cent (and that for advances on public securities to 7 per cent). By August 20, 1914, the rates fell to 5 and 6 per cent respectively. A special bureau for new discounts was opened in Paris. Yet, in spite of this aid, resort was had by other institutions to

Heavy
responsibility
on the Bank
of France.

Demand for
loans.



the moratorium and the restriction on the withdrawal of deposits. We are somewhat in the dark as to what happened immediately after the outbreak of the war, since the Bank of France did not publish its accounts until February 4, 1915.¹ Nothing was, in fact, gained by this reticency, because the credit events in the omitted months were inevitably disclosed by the later developments. The whole story of the credit operations of the bank, and thus those which are pivotal for the organization of credit in France, are presented in Chart IV, drawn on the same scale, and hence comparable with those of the Bank of England at a glance.

The direct service of the Bank of France in relieving the needs of the public appears, of course, in the expansion of the discounts and advances.² In the period be-

¹ From statements by M. Ribot, minister of finance, we obtain the following figures for the period of unpublished accounts in 1914 (millions of francs):

	October 1	December 10	December 24
Specie reserves.....	4,411	4,492	4,413
Discounts.....	4,476	3,849	3,735
Advances to the state.....	2,100	3,600	3,900
Notes in circulation.....	9,299	9,986	10,042
General deposits.....	2,177	2,671	2,650

L'Économiste Français, October 10, December 26, 1914; February 6, 1915.

² To those approved persons or firms to whom current accounts have been opened, the Bank of France makes discounts, in the main, on satisfactory commercial paper brought by merchants and manufacturers, such as bills of exchange, checks, bills to order, and commercial and agricultural warrants of fixed maturity, which have not more than three months to run, and which bear the signatures of three persons, tradesmen, agricultural syndicates, or others, known to be solvent; and as a bankers' bank, on approved paper of the private banks presented for rediscount (amounting normally to about 70 per cent of the discounts at the bank).

Advances are loans made on stock exchange securities, easily convertible in normal times into cash, usually only on French Government securities, certain ones issued by the departments, communes, municipalities, on those of French colonies, and French railways, varying from 60 to 80 per cent of their market value.

The term deposits is applied generally to funds left by private persons whose accounts are not active, and which are in the nature of reserve funds.

fore the war these items together ran below \$500,000,000, but obviously rising with the vicissitudes of trade

and credit in times of emergency. The movement of the line representing these joint items presents very clearly the credit situation as affecting the general business public.

Rise of
bank's
discounts and
advances.

Its immediate and greatest rise came in the period when no accounts were published, extending over the end of 1914. By February 4, 1915, they had climbed to about \$850,000,000, which formed the peak of the movement during the whole war. Thereafter there was a steady decline in the requirements of the business public.

The moratorium, however, left the Bank of France with a heavy burden of assets whose liquidation was postponed, and whose repayment in full depended on

the uncertainty of the future. There was no guaranty against loss to the Bank by the government in carrying these delayed obligations,

Reduction of
postponed
obligations.

as in the case of the Bank of England. In August, 1914, at the height of the crisis, the total pre-moratorium paper carried at the Bank of France rose to \$896,000,000, of which about \$160,000,000 belonged to the districts occupied by the Germans.¹ By the end of the year 1915 the total had been reduced to \$367,000,000, and by June, 1917, to \$223,000,000. All through the war this item was steadily reduced; while the discounts reflecting the general volume of business kept about the same level, or even decreased. The loans on securities toward the end of 1915 showed a tendency to rise, being highest at the end of 1916, and thereafter slowly declining. The general tendency of the line in Chart IV representing the total burden of loans (discounts, advances on securities,

¹ *L'Économiste Français*, July 1, 1916, p. 53. In 1870-1871 the bank had to carry only \$173,700,000 of moratorium bills.

and pre-moratorium bills) to decline is due to the repayment of postponed obligations, with the comforting result that by the middle of 1917 the total volume of loans was only a little more than \$100,000,000 above the normal just before the war. Clearly, there was no expansion of credit to any perceptible amount in the dealings with the general business public. The burden of pre-moratorium bills was accompanied, as was natural, by a lessened volume of business paper. The highest published figure for all loans to the public in the European War is about \$385,000,000 above the highest annual average of loans in the Franco-Prussian War.¹

In August, 1914, the armament firms became very busy, and some slight revival took place in securities. In September transportation became more available. From September to December the withholding of deposits was slowly relaxed. In October the moratorium was revised. By this time also the thrift of the country enabled some debtors to pay off their notes at maturity and the outlook showed improvement; while the relaxation of the moratorium and some small dealings in securities brought more or less money out of hoarding. The bourse, however, was tied up. By friendly agreement about 2 per cent of the dealings had been disposed of. In October the settlement on stock dealings went through with unexpected ease. In

The bank
and the
bourse.

¹ Loans at Bank of France (millions of francs):

1871.....	1,164	1892.....	550
1872.....	2,089	1907.....	1,125
1873.....	2,299	1908.....	897
1874.....	1,760	April 23, 1914.....	2,136
1875.....	1,305	July 31, 1914.....	3,187
1882.....	1,151	February 4, 1915.....	4,243
1885.....	784	February 3, 1916.....	3,534
1887.....	578	July 27, 1916.....	3,079
1890.....	699	February 8, 1917.....	3,199
1891.....	760	June 7, 1917.....	2,840

November the Bank of France finally agreed to aid in liquefying the mass of engagements based on securities by advancing to the Parquet 40 per cent on loans made for carrying forward stock settlements if guaranteed by the Syndicat des Agents de Change. This measure brought only partial relief. As time went on the settlement hung heavily over the market. Appeals were made for help, but the Bank was unwilling fully to liquidate the share market, because securities were not yet salable, and very properly it did not wish to swell the issue of bank-notes made on frozen assets. As we shall soon see, the notes were to be swollen only too much by the demands of the government.

In normal conditions the sale and exchange of goods and securities were the basis of all credit operations; but it was expected that the soundness of these transactions should be tested at any settlement by payments in money. Hence the necessity of having such supply of a means of payment as would meet the needs for a medium of exchange in the business community of France (since the deposit-currency was not in use). But beyond the matter of the desired quantity, which was automatically regulated by redemption on demand in normal times,¹ was the equally important matter of the quality of the currency. As long as immediate redemption in gold went on, the notes would remain at par in gold.

But, following the example of August 12, 1870, and an unwritten European opinion seemingly based on the fear of gold being hoarded, or slipping out of the territory, or into the hands of enemies, the Bank of France, by Act of August 5, 1914, suspended specie payments.²

¹ Cf. *supra*, pp. 149, 151.

² Cf. *Journal Officiel*, August 6, 1914. The Act applied also to the Bank of Algeria. Cf. Appendix II, A.

That is, the Bank was, until otherwise determined by law, freed from the obligation to redeem its notes in specie, and the notes were made legal tender for all debts, public and private (*cours forcé*). In times of peace the Bank has had a tradition in favor of keeping a large gold reserve, not infrequently running above 80 per cent of the note-issues, in the belief that thereby discount rates could be kept low, and a sense of absolute security and complete financial independence could be maintained. In June, 1914, the reserves of gold were over \$900,000,000, or 76 per cent of the note-issues. In addition much gold was held in hoards by the thrifty French, estimated in 1915 at not less than \$700,000,000.¹ Also exports of gold, except by the Bank of France, were forbidden. In July, 1915 (following the example of Germany), an appeal was made to the public to send in gold to the Bank of France to be exchanged for notes. By October \$160,000,000 had been brought in by individuals; and, in spite of shipments of gold to England (in May, 1915, \$40,000,000) and payments of \$60,000,000 over its counter by the end of 1914, the receipts of gold have continued to increase until the reserves of specie at the Bank by the end of the third year of the war had risen above \$1,100,000,000.² This encouraging growth in the absolute sum of specie was, however, offset by the discouraging inflation of the note-issues, of which the specie at that time was only 28 per cent (or only 24 per cent of all demand liabilities). It is this unprecedented increase in the volume of Bank of France notes which furnishes

Suspension
of specie
payments.

Stock of
gold.

¹ The governor of the Bank estimated that in 1908 the gold in France was \$1,000,000,000 to \$1,200,000,000, of which the Bank then held \$639,000,000. *National Monetary Commission*, No. 405, p. 218. In 1870 the bank reserves were about \$250,000,000.

² On October 1, 1914, the silver amounted to \$64,000,000.

the one outstanding problem of French credit operations, dominating all others.

It is at once apparent that the phenomenal enlargement of the note circulation (see Chart IV), surpassing that of any other country, has not been made in response to

**Phenomenal
increase of
note-issues
due to
advances to
the state.**

the needs of business for its monetary uses.

An increase of credit in the form of money, which is the one main currency of France, has taken place without any regard to the demands of trade for an increase in the medium of exchange. The note-issues of the Bank of France at the end of the third year of the war were more than three times as great as the issues required for normal trade in the period preceding the war. Inasmuch as the inconvertible notes drove all specie out of circulation, a considerable issue of notes was absorbed by the vacuum thus produced; and even notes were hoarded in large amounts, because of the distrust of banks. The reason for this unequalled inflation, however, has not been to supply a monetary want, but to meet a fiscal need of the government. A system which cannot separate the monetary from the fiscal requirements of the country is dangerous alike to the mechanism of exchange and the standard of prices (which is certain to depreciate) and to the credit of the government in its borrowing. The excessive issues of the Bank are due to its advances to the state, which can be carried out only by an issue of notes. Thus is revealed the weak point in the French organization of credit. If the Treasury could make its payments by checks acceptable to its creditors drawn on sums placed to its credit at the Bank, there would be no reason for issuing notes in proportion to the advances to the state and hence no necessary derangement of the usual medium of exchange in a time of great emergency.

The already heavy indebtedness of the nation and the shock of war forced the government to borrow from the Bank of France in the beginning of the struggle, but the advances have continued to increase in a menacing manner, as may be seen by the following table (in millions of francs):

1914, October 1.....	2,100	1916, November 30.....	6,500
December 24.....	3,900	December 28.....	7,400
1915, February 4.....	4,100	1917, February 15.....	8,600
October 7.....	7,100	March 1.....	9,000
December 23.....	5,200	April 5.....	9,600
1916, April 6.....	7,100	May 10.....	10,100
October 5.....	8,800	June 7.....	10,600
		August 9.....	10,900

The advances to the state, secured only by government obligations, thus form the largest item in the cover behind the notes of the Bank, being over 54 per cent at the end of the third year of the war.¹ The government, receiving a credit from the Bank of France, draws out bank-notes and pays them out for purchases of war supplies. From the hands of the public, if notes are not needed in the circulation, they would to some extent return to the Bank in payments made into current accounts. In spite of the slight reductions² in loans to the government at the end of 1915 and of 1916 (which lowered the note-issues, as shown in Chart IV), the demands on the Bank have steadily increased. These vast advances to the state (as contrasted with the highest

Advances to
the state.

¹ The limit to the advances by the Bank to the state is fixed by a special convention. On September 21, 1914, it was fixed at 6,000,000,000 francs; on May 4, 1915, it was raised to 9,000,000,000 francs; on February 13, 1917, to 12,000,000,000 francs.

² In October, 1916, by virtue of the placing of a long-term loan of \$2,272,000,000, toward which \$1,100,000,000 were paid in in cash, the government repaid the Bank \$440,000,000, reducing the advances to the state to \$1,260,000,000.

figure in the War of 1870 of \$285,000,000) to over \$2,000,000,000, so far beyond anything in the previous history of the Bank, seem almost incredible. The only means by which the state can reduce this debt to the Bank are taxation of her people or borrowing by short or long term obligations. When advances by the Bank are not possible, funding operations by the Treasury become necessary.

As is well known, a legal limit was set on the maximum note-issues. Before the war began it was fixed, December, 1911, at 6,800,000,000 francs.¹ On August 5, 1914,²

the limit was at once raised to 12,000,000,000 francs; on May 11, 1915, to 15,000,000,000; March 15, 1916, to 18,000,000,000; February 15, 1917, to 21,000,000,000, and September 10, 1917, to 24,000,000,000. By August 9, 1917, the notes in circulation had risen to 20,434,000,000 francs—or \$4,087,000,000—a sum of inconvertible notes alone (irrespective of national bonds, treasury bills, etc.) about \$1,000,000,000 greater than the whole debt of the United States at the end of the Civil War.³ This unexampled expansion of the bank-notes is directly due to the prodigious advances to the state.⁴

We are faced directly with the question as to the fun-

¹ From 3,200,000,000 francs at the end of the Franco-Prussian War it had been raised, January 28, 1893, to 4,000,000,000; November 17, 1897, to 5,000,000,000, and February 9, 1906, to 5,800,000,000 francs.

² By Act of August 5, 1914, the limit can be increased by the Conseil d'État on the advice of the Ministry of Finance. Cf. Appendix II, A.

³ George H. Pendleton, once candidate for the presidency in the United States, proposed what was regarded as the most extreme greenback policy of printing enough inconvertible paper to pay off our whole national debt, and was easily defeated. But such a policy has actually resulted in France, a country noted for its sound monetary policy, in issues larger than the debt caused by our Civil War.

⁴ The notes of the Bank of Russia by April, 1917, had been increased to 11,153,000,000 of roubles, which at par (51 cents) would amount to \$5,688,000,000. Thus the Russian Bank alone has the unenviable record of having issued more notes than the Bank of France.

damental soundness of the fabric of credit thus built up, which rests upon the Bank of France, and, therefore, upon the quality of the assets on which the notes have been issued to such exceptional amounts. These notes, as explained, are issued only upon specie, statutory loans to merchants and advances on securities, and advances to the state.¹ The specie has been steadily increasing to a sum never before equalled. The discounts have remained at a safe figure, showing no inflation. The advances on securities have been rising somewhat (but only about \$78,000,000 above the normal of July, 1914). The most obvious sign of returning internal health has been the reduction in the volume of pre-moratorium bills—which, as frozen assets, might have been regarded as weakening the support behind the notes—from \$896,000,000 to \$223,000,000. Indeed, the postponed obligations form less than 7 per cent of the assets behind the notes. As to these elements in the cover for the notes, there is no cause for lack of confidence as to how the future is to be met. The same cannot be said, on the other hand, about the amazing increase of notes based on the advances to the state. Their constant increase advertises the inability of the Treasury to borrow in the market by normal fiscal methods sufficient funds to meet the enormous expenses of the war. Thus the weakness of the fiscal situation is, by the French organization of money and credit, inevitably affecting the soundness of the note-issues of the Bank of France, the very nerve-centre of the whole system of credit. In short, the stability and future of French credit depend on the liquidity of the obligations

Soundness of
the credit
fabric.

¹ There is no legal percentage fixed for the amount of commercial paper, specie, etc., relatively to the whole issue of notes, as in Germany and other countries.

issued by the state. This is the crux of the whole matter.

§ 5. It has long been a stock subject of remark that, in times of war, governments seem unable to resist the temptation to confuse the monetary with the fiscal functions of the state, and thereby issue forms of money as a means of borrowing. The obvious truth that reasons for changing the quantity of money in circulation, complicated as they must be with difficult questions as to the needs of trade, are of an entirely different sort from the reasons which have to do with the ability of the Treasury to place bonds and borrow large sums. The shallow thinking which assumes that the getting of capital is the more easy the greater the number of counters used in exchanging goods, or the theory that issues of demand forms of indebtedness which serve as money are loans without interest, seem to lie behind this common delusion. What has escaped attention in a crisis are the inevitable after-effects on the value of the paper, the tendency to over-issue, the depreciation of the money, the consequent rise of prices, the increased cost of living and of all government purchases, the derangement of the foreign exchanges, the growth of speculation and wide disturbances in trade. A deranged currency introduces uncertainty into production, and an upheaval of trade makes borrowing by the state more expensive and less easy. Moreover, the resort to inconvertible paper creates a belief in the incompetency of the management of the Treasury and lowers its credit in obtaining loans.

The path by which France wandered into the suspension of specie payments and into excessive issues of bank-notes may have been different from the general one just

Monetary
needs differ
from fiscal
needs.

indicated (which was the one followed by the United States in the Civil War), but the consequences were the same. In France this errancy is due to the peculiarity of her monetary habits and of her organization of credit. To us it seems almost inconceivable that a large loan cannot be made to the state without, by the very act of granting the credit, increasing *pro tanto* the volume of the circulation. If the experiences of the European War are to teach wisdom, it seems hardly possible that the obsolete habit in France and Germany of making payments chiefly by passing note-issues from hand to hand, thus carrying with it the unnecessary expansion of money whenever loans are increased, should be hereafter maintained. It is a habit also which cuts them off from the efficiency of a more modern organization of credit, such as is possessed by Great Britain and the United States.

But there is far more to the matter than this. As a general principle the rule should be laid down that the fiscal should be kept wholly separated from the monetary operations of the state. If the standard of prices and contracts were kept undisturbed, the costs of supplies and the whole magnitude of national debts would be freed from the results of depreciation. To mingle the monetary, the credit, and the fiscal functions, as is done in France, seems triply fatuous. There the central institution of credit is at the same time the issuer of money; by French monetary habits a credit operation is necessarily carried through by the issue of notes; and then, as an additional complication, forms of money are forced out, not because of the needs of business, but in direct connection with a critical condition of the public finances by large advances from the Bank to the state. The contrast with similar operations in England is full of significance. There the

Fiscal
monetary
and credit
functions
confused.

governmental borrowings rise and fall, the fiscal dealings go on between the Treasury and its creditors, without in any way affecting the separate function of supplying the money of the nation. Moreover, the fiscal operations of the Treasury are kept distinct from the credit operations of the banking department of the Bank of England which discounts for the business community. In the corresponding crisis in England the placing of government loans went on without deranging the currency or private credits, except so far as Lloyd George mistakenly copied wrong European practice by issuing government currency notes. The difference in the working of the French and the English systems is strikingly shown by a comparative study of Charts II and IV, especially in regard to note-issues and discounts. As will be seen later (in Chart V) the theory of the German Reichsbank is not in this respect an improvement on that of the Bank of England. In France the Bank is in the difficult position, not of placing state loans with the public as the agent of the Treasury, but of having to lend to it directly, just when a crisis in credit is developing in the world of private business. The worth of the system which requires the bank of issue also to lend to the state in the form of notes and thereby gives rise to very serious complications in the general level of prices of all goods, the rates of foreign exchange, and a long period of inconvertibility after the war, is open to question. Would it not be infinitely better for the government to borrow by normal fiscal methods from the public, and not at the same time wreck the monetary system by borrowing from the Bank? It would seem to the impartial observer that the experience of this war has demonstrated the weakness of a tradition which confuses the monetary and the

Bank of
England in
better
position.

A lesson to
France.

fiscal functions of a great nation in its organization of money and credit. By way of contrast, the system of Great Britain stands out strikingly sound, entailing no such dangerous consequences after the war, and offering an example to this country, as it is entering upon enormous war expenditures, to avoid the issue of forms of money as a means of increasing its credit to the public.

§ 6. The suspension of specie payments alone must have brought the notes to a discount. But when to suspension was added the increase of the inconvertible notes to an unparalleled volume, it was inevitable that the paper should seriously depreciate.

The extent of the inflation of the currency by the end of the third year beyond the normal requirements before the war is at least 40 per cent. The governor of the Bank¹ estimated the gold of France in 1908 at no more than \$1,200,000,000, which, with the bank-issues early in 1914 of another \$1,200,000,000, made a total circulation of \$2,400,000,000. Since the notes have reached nearly \$4,000,000,000, there is an excess over a pre-war basis of about \$1,600,000,000. If, then, we assume, with Professor Gide,² that not only all the gold but also some \$600,000,000 of notes have been hoarded or withheld from circulation, there yet remains an expansion of the money amounting to \$1,000,000,000, or perhaps 40 per cent beyond that in use before the war. As the war goes on there will continue to be loans to the state and probably an increasing volume of notes. There can be little doubt

Inflation of
the
inconvertible
currency.

¹ *Supra*, p. 171, n. 1.

² In Kirkaldy's *Labour, Finance, and the War* (p. 252), Professor Gide argues that (April 10, 1916) the circulation had not been increased, because all the gold had disappeared, and that 3 milliards out of a total of 15 milliards francs of notes had also been hoarded.

already of a very serious inflation of note-issues, an inflation, too, quite unrelated to the demands of trade for a medium of exchange. The need of a large quantity of notes for payments to the army cannot be greater than the civilian needs for the same persons when engaged in the production rather than in the destruction of goods. Therefore the large payments needed for the soldiers cannot be regarded as an increased need for notes; they are rather only a reason for larger loans by the state, which ought not to be synonymous with a larger quantity of the circulation.

In the over-issue of notes by the Bank of France there is an illustration of the principle that immediate, not ultimate redemption of paper money is always necessary to

Immediate redemption regulates the value and quantity of the notes.

its circulation at par. If specie can be obtained on presentation of the notes, their value cannot vary from that into which they are convertible; moreover, no more notes can remain in circulation than are actually needed

by the public, as decided by their own acts in retaining or redeeming them, irrespective of any wishes of the issuer; so that immediate redemption automatically determines the quantity of notes needed by trade. But, when redemption ceases, both the value and the quantity of the notes become a matter of speculation. The discount on the notes reflects the opinion as to the certainty and future redemption of them. If, as in the case of the Bank of France, large holdings of gold are retained and not paid out, that fact may affect the possibility of redemption in the future. But even large holdings of gold behind the notes will not keep them at par if there is no convertibility at sight.¹

¹ In the War of 1870-1871, under the skilful management of such financiers as Thiers and Léon Say, the circulation was saved from extreme inflation; and

Yet this fund of gold does have some effect; how much, is an interesting question. In France and Germany it is evidently assumed that an accumulated stock of gold will maintain confidence in the notes. The possibility of redemption by the Bank of France, however, is influenced by other matters than the stock of gold, which is only about 28 per cent of the notes. Since 54 per cent of the cover for the notes is made up of government debt, and since the debt of the state has risen beyond all measure of experience, it is quite clear that the Treasury—even after the end of the war—will be loaded to its full capacity by the issue of enormous funding loans, so that it will be obliged to postpone the repayment of its debt to the Bank as long as possible. Inasmuch as suspension continued seven years (to January 1, 1878) after the end of the War of 1870–1871, when advances to the state totalled only \$294,000,000, the period of postponement when the debt to the Bank is already over \$2,000,000,000, is likely to be much longer. Hence the possibility of redemption, even for a considerable period of years, is seriously compromised and must be reflected in the depreciation of the notes. Ultimate redemption, therefore, even with a large fund of gold in sight, but locked up, cannot have a potent influence in preventing depreciation.

Effect of
retaining
gold on value
of notes.

It is not possible, of course, to measure the depreciation of the notes solely by the higher level of prices, because prices are affected by other forces than the quantity of

the foreign exchanges (especially in connection with the payment of the Indemnity of War) were handled in so masterly a manner that there was very little depreciation of the bank-notes during the suspension of specie payments for seven and a half years. In one extraordinary case of exchange on London the premium on gold rose to 4 per cent, but in the period after the end of the war the paper stayed close to par.

the circulation or the premium on gold: Yet (a) the effect of depreciation in the notes would, in itself, have a direct influence on raising prices to the extent of that de-

preciation. For instance, the prices of wheat or coal imported into France from a gold-standard country like the United States would rise

in proportion to the depreciation of the notes relatively to gold because more notes would *pro tanto* have to be offered to equal the gold price. That could not be avoided. But (b) prices in France might rise higher than the level indicated by depreciation of the notes, for reasons entirely independent of the quality of the circulation. Prices of all goods directly or indirectly needed for the war would rise, due to the necessity for immediate delivery, to the sudden increase of demand from the government, to the increased cost of production arising from the withdrawal of labor

Depreciation
and prices.

Prices may
rise for
reasons
other than
the volume
of notes.

into the army, and to the greater expense because of war conditions in obtaining raw materials and manufacturer's supplies of every kind.

(c) Both special and general conditions would, in addition, produce scarcity prices for many articles, such as foodstuffs and coal. The occupation of her coal-fields by German armies made coal scarce and high to France. The seasons and the lack of labor have reduced the grain-crops and the supply of food the world over. The shortage in merchant shipping and the abnormally high freight charges would almost alone explain a serious rise of prices. For all these obvious reasons, therefore, we can account for the high range of French prices without being obliged to explain the rise by the increased quantity of notes added to the circulation. This increased volume of inconvertible paper is influential in affecting the depreciation of the paper; and prices of goods expressed in a depreciated paper will, of course, rise. There is no

reason, however, to suppose that prices would have risen simply because more notes were in circulation, if those notes had been redeemable in gold. The depreciation of the paper franc in gold-using neutral countries, such as the United States, was about 12 per cent, and at the end of the third year of the war stood around 10 per cent. The increase in bank-notes was more than three-fold.

Nor did prices rise in any direct ratio to the increase in the quantity of the circulation. The prices of thirteen food articles of general consumption computed from figures in cities of over 10,000 inhabitants, for the whole of France had risen from the third quarter of 1914 to the end of the second quarter of 1916 by 37 per cent.¹ How uneven were the changes of prices in different groups of commodities may be seen in the following table,² which indicates that special causes were at work. Such unevenness cannot be explained by a single cause like the increase in the quantity of money in circulation.

§ 7. In its foreign operations the credit organization of France has been put to a severe test. As with other belligerents, there has been an upheaval in French foreign trade, an inability of foreigners to pay their debts at

¹ *Bulletin de la Statistique générale de la France*, tome V, Juillet, 1916, p. 356. Gide (*op. cit.*, p. 251) gives the rise in April, 1916, as 35 per cent for France as against 50 per cent in England and 100 per cent in Germany. If the quantity theory were true, prices ought to be much higher in France than in England or Germany.

² *Ibid.*, pp. 306-312.

RISE OF PRICES FROM MIDDLE OF 1914 TO MIDDLE OF 1916

Freights.....	300-400%	Grains (Paris).....	64%
Chemicals.....	130%	Sugar, rice, etc. (Bordeaux)	217%
Fodder (Paris).....	74%	Silk (Lyons).....	36%
Vegetable oils (Paris).....	116%	Cotton, wool, leather, etc.	
Metals (Paris).....	70%	(Havre).....	67%
Cotton yarn (Rouen).....	47%		

maturity, a falling off in exports, increased purchases abroad of coal, food, steel, and the whole list of war supplies, and a reversal of the usual trade balance in her favor. The foreign exchanges have, of course, been thrown into confusion. But the conditions affecting exchange on France are different from those on England, and a comparative study discloses many interesting phases of the foreign exchange problem.

Harking back to the causes influencing the levels of foreign exchange, when discussing English credit,¹ we find the same general forces at work in both countries, with the one marked exception for France of a depreciated currency. The characteristic feature of the exchange problem which is brought out in the experience of France is the effect of the depreciation of the bank-notes. Some discussion has been devoted to the attempt to measure the discount on the notes by the price of exchange. The determination of the exact percentage of depreciation, however, is not so important as the cause of it, to which attention has been given in the last section. In passing on to the relation of the depreciated notes to the foreign exchanges, granting a depreciation of the legal circulation, we are given thereby a fundamental cause of at least a part of the rise in the level of quotations for foreign exchange. A buyer in New York of a bill on Paris will not give par for it in gold when he knows that the bill when presented for payment to a French bank will be paid in francs, which are at a discount of 10 per cent on gold. He will give no more than the value of the currency in which the bill is redeemed. That is, exchange (charges, etc., apart) necessarily follows the value of the money.

Upheaval in
foreign trade.

Effect of
depreciation
on exchange.

¹ *Supra*, p. 125.

It is inevitable that exchange should rise if the notes depreciate—and for the same reason that the price of any commodity would rise. Of course, if there were redemption of the notes in gold on demand, exchange would stay within the shipping-points. The special fact to be noted for France is that the customary means of payment in international trade, the bill of exchange, is not now redeemable in gold. The case, therefore, is the same, and governed by the same principles as that of an inconvertible domestic currency. The effect of inconvertibility on the international means of payment is produced by the disappearance of the shipping-point for gold. If gold ceases to move when the play of demand and supply of bills brings the quotations to the point where it is profitable to ship gold rather than pay the high price for bills, the general effect on the value of bills is practically the same as the effect of suspension of gold payments on the value of the Bank of France notes. It removes the support which holds up their value. Once that support is withdrawn, the value of bills, just as that of bank-notes, is thereby subject to all the other influences, such as rumor, speculation, and the fortunes of war, which may affect the return to redemption in the more or less remote future. One exception is to be noted. Since gold has become the accepted basis for international settlements, it is conceivable that, after the war, shipments of gold might be restored even before redemption of the notes in gold had been reached; consequently, bills might return to par in gold before that of the notes—provided the convertibility of bills were separated from that of notes.

Effect of gold
shipments
and their
absence.

It must be obvious, then, that the price of exchange first follows the level of the value of the money in which it is paid, just as a float follows the level of water in a

reservoir. As the notes go back to par the level of exchange will follow. In normal times of peace bills cannot rise or fall beyond the quotations which cover the cost of shipping gold; when those points are reached, gold is sent; that is, immediate redemption in gold takes place. Since August 5, 1914, these limits have been removed. In other words, there is no fixed level of the water in the reservoir; it may go down indefinitely; consequently, the float on its surface will follow the changing level.

Those who are intimately affected by the course of the war and are unwilling to admit the depreciation of the notes,¹ are disposed to believe that the fall in the exchange is due solely to the adverse balance of trade and not at all to the depreciation of the currency. The enormous inflation of the currency, the suspension of specie payments, could not help causing a decline in the value of the notes; some rise of prices and the fall of exchange in neutral gold-using countries would be inevitable consequences of that decline in the value of the notes. If the balance of trade had been reversed, the exchanges would have been kept around par by the shipment of gold. That being prohibited, there is no support to the level of the exchanges.

Then must come into play, if the level is to be sustained, the operation of the fundamental forces underlying international credit. The situation of France made it impossible to greatly increase her exports of goods in order to help pay for the much-needed imports of food and war supplies. The dislocation in trade was very serious. In five months of 1915, as compared with the same months in 1914, the imports had declined 25 per cent and exports 58 per

Exchange will follow the value of the notes.

War checked French exports.

¹ Cf. Gide, *op. cit.*, p. 252. The same view is held in Germany.

cent.¹ In 1915 the industries of Lyons had not shown recovery; but the china, glass, woodworking, and metal industries showed improvement, while there was a gain of perhaps 20 per cent over the whole field. Workers for the government, as well as those in the chemical, leather, cotton, woollen, canned food, chain, motor, and engineering industries, were occupied night and day. Those formerly producing for export were now largely occupied in supplying war goods. The balance of payments, having been in favor of France before the war, so continued for a time after war began. The franc did not fall below par until May, 1915. It was then that the merchandise account was reversed. In 1915 imports exceeded exports by \$1,000,000,000, and in 1916 by over \$2,500,000,000. The purchases, especially from the United States, were very heavy. The payment for the imports, however, could be offset only to a reduced extent by the exports of goods (although there was a noticeable gain in 1916).

The resort to sending securities was tried, but France had not accumulated American securities in such amounts as she had those of other countries. It is estimated² that the French held in 1912 over \$8,000,000,000 of foreign securities (out of total security holdings of about \$22,000,-

¹ FOREIGN TRADE OF FRANCE (MERCHANDISE FOR HOME USE) IN MILLIONS OF FRANCS

	1912	1913	1914	1915	1916
Imports.....	4,162	4,240	3,575	3,550	4,459
Exports.....	3,224	3,372	1,415	1,449	1,717

The effects of the war are seen in the higher imports in 1916, due to larger imports of food and manufactures. The falling off in exports is mainly in manufactures and materials for manufacture. *Bulletin de la Statistique générale de la France*, tome V, p. 299.

² Yves Guyot, "The Amount, Direction, and Nature of French Investments," *Annals American Academy*, LXVIII, pp. 8, 12, 17.

000,000); but the estimate of \$1,000,000,000 in American investments is thought to be far too high. No doubt our

Loans from
the United
States. securities, whatever their sum total, were sent home to be realized upon to cover French purchases. But the main dependence was on the

securities of other neutral countries held by Frenchmen. In July, 1916, the Minister of Finance asked the owners of such securities to lend them to the government, which gave in return a receipt negotiable on the bourse and at once advanced to the owners one-fourth of the net annual income. Thus provided with what was reported at the time to be about \$200,000,000 of such investments, France was able to use them as collateral for loans to pay for purchases here.¹ Also a number of important French industrial concerns united in borrowing from private American bankers, in order to pay for exports to France, giving French Government obligations and bonds from neutral countries as collateral. The French merchants drew on the New York banks, which accepted the three months' paper, with an agreement to make five renewals if desired. Thus French acceptances appeared in our money centres, and to that extent obviated a resort to the exchange market. After the United States entered the war our government loaned directly to that of France. Such measures to a large extent, of course, offset the purchases of France in this country. That is, the creation of credits abroad by France saved the export of gold when exports of goods

¹ Immediately a loan of \$100,000,000, repayable in three years, at 5 per cent, guaranteed by the syndicate of the bourse, was placed in New York with the American Foreign Securities Corporation, composed of banks such as J. P. Morgan & Co., First National Bank, National City Bank, Guaranty Trust Company, and others, which issued and sold their own obligations, protected by the securities of neutral states that were guaranteed by the French Government. The dollar was fixed at 5.18 francs.

April 1, 1917, the French Government placed a loan of \$100,000,000 in this country, by its own direct obligations, supported by collateral, at 5½ per cent.

fell off, and postponed the settlement—which is the characteristic of credit—to the future.

Only after all other devices fail in balancing the international account does gold move. Even in this extraordinary emergency France did not support her exchanges, as we have seen, by the shipment of gold. And yet an indirect use was made of her large gold supply. In three months (April, May, and June) of 1916, the Bank of France sent to London about \$100,000,000 of gold, receiving in return a credit on which she could draw for three times as much, thus aiding England with gold, as she had several times before (in May and September, 1915), in supporting the exchange market on New York.

Indirect
shipments of
gold.

The working of the foreign exchanges, involving, as it does, matters of international credit, is affected, as has been said, not only by all the forces which appear in the case of England, but also by the complications arising from the depreciation of the bank-notes. Taking away payments in gold and the shipping-points, all normal limits to fluctuations in exchange are removed. Thus the exchange may be modified in price by any of the considerations which touch the credit of France and the uncertainties of her trade.

§ 8. Having thus studied the organization of French money and credit, and followed its workings in the very difficult conditions during the first three years of the war, we have come to see how the mechanism of private credit has been closely related to that of public credit through the Bank of France. We have also seen what complications have arisen from this relationship. If, in this critical time, private credit has known great tribulation, *a fortiori* pub-

Appalling
fiscal problem
for France.

lic credit must have fared worse. Starting the war with the largest debt of any country in the world, obliged to borrow to meet extra expenses in 1914, with instalments on the bond-issue yet unpaid after the war began,¹ the unprecedented requirements of the most expensive war in all history looming in gigantic figures before him, the task of the finance minister must have been appalling. How France could carry this burden, on what resources of strength she could draw, what fiscal measures she could adopt, are part and parcel of that psychology and those characteristics of the French by which they also met the enemy in the field. The fiscal needs were not those of an ordinary emergency.

In meeting the cost of mobilization and the early enormous expenses of war, France signalized by her first fiscal measures the general policy which seemed to have been forced upon her by circumstances. Under her existing organization of credit the line of least resistance, as well as precedent, led her to borrow from the Bank of France. As we have seen, this sort of borrowing was continued to a dangerous extreme. It was, however, in accordance with the general policy of borrowing by temporary and short-time obligations in the expectation that, later, long-term funding operations

Early loans
from bank.

¹ In 1914, besides a budget of \$1,075,000,000, a 3½ per cent loan of \$170,000,000 was placed in July to cover expenses in Morocco, the three years' military service, and the increase of the fleet. When the war broke out the subscribers to this loan found it difficult to meet the unpaid instalments coming due, one at the end of October and another at the end of December. Although the two instalments were changed to four, the loan hung heavy over the market. They were quoted at about 82, being held largely by the coulisse. This loan proved a great annoyance in later operations. On January 26, 1915, the government agreed to accept payments already made on this loan at 91 (the price of issue) in payment of future loans, and arranged with the Bank of France to lend to subscribers the sums needed to meet coming instalments. A greater part was converted into new National Defense Stock, running between five and ten years. By the spring of 1915 all but about \$4,400,000 were paid off.

might be carried through, which would take up the floating and maturing debt as it fell due. The long-established preference of European money markets for short-term government bills was relied upon by the French Treasury to float very large sums of *Bons du Trésor*, in small denominations of \$20, \$50, and \$200, for perhaps one year at 5 per cent. Early in 1915 some \$50,000,000 of these were absorbed by London.

Treasury
bills.

Likewise, the *Bons de la Défense Nationale*, running usually from three to six (but not over twelve) months, at 5 per cent, of small denominations (later purchasable at post-offices as low as \$4 and \$1), appealed to small investors. Large amounts were taken by the credit houses, while the coulisse subscribed early for \$100,000,000; and the Bank of France accepted them as collateral for 80 per cent of loans. By February, 1917, the issue of short-term national bonds was reported to be \$2,900,000,000. The resort to temporary and short-term borrowing is indicated by the statement of M. Ribot, August 5, 1915, that by then about two-fifths of the needs of the Treasury had been met by advances from the Bank of France and the issue of notes, and three-fifths by short-term treasury bonds.

Short-term
bonds.

By November 15, 1915, a long-term national loan, or perpetual rentes, popularly known as the "victory loan," at 5 per cent, was issued at 88, to the amount of \$3,100,000,000, callable in sixteen years. A second long-term national loan of 5 per cent rentes was successfully placed by October, 1916, to the amount of \$2,275,000,000.

Long-term
loans.

By June, 1917, the war debt must have been approximately as follows (in millions):

National Defense Bonds.....	\$2,900
Other national obligations.....	400
Long-term 5% Loan, November, 1915.....	3,100
Long-term 5% Loan, October, 1916.....	2,275
Advances by Bank of France.....	2,120
Advances by Bank of Algiers.....	20
Loans in England.....	1,185
Loans in United States.....	795
Advances to Allies.....	775
Other debt.....	930
	<hr/>
	\$14,500

According to the report of the budget committee of the Chamber of Deputies, France had spent on the war, by the middle of 1917, \$16,600,000,000. If the war debt be taken as about \$14,500,000,000,¹ on which the annual charge was \$502,000,000, to find the total burden at the end of the third year² of the war, there must be added the pre-war debt of \$6,348,000,000, with its annual charge of over \$200,000,000, thus creating with other charges an annual

Annual
charge.

¹ Cf. London *Economist*, December 9, 1916, p. 1084.

² For a period longer than that given above, that is, including nine months of 1917 in the period since the war began, the Finance Ministry gives the following analysis of expenditures (in millions of dollars):

	Strictly military expenditure	Charges on debt	Social expenditure	Other expenses	Total
Total, last 5 months, 1914.....	\$1,173	\$12	\$98	\$33	\$1,318
Total, 1915.....	3,155	380	542	486	4,561
Total, 1916.....	4,734	653	659	480	6,526
Total, three-quarters, 1917.....	4,107	644	598	453	5,802
Total since outbreak of war.....	\$13,169	\$1,689	\$1,897	\$1,452	\$18,207

In this period the receipts from taxes and budget are given as \$2,692,000,000. Cf. London *Economist*, August 4, 1917, p. 155, and September 8, 1917, p. 357.

burden of over \$800,000,000 to be raised by taxation to pay the interest alone on the public debt of about \$21,000,000,000. The last peace budget in 1914 called for \$1,075,000,000.

To the mind accustomed to pre-war finance these figures seem incredible. What is to be said as to the capacity of France to carry this load—or a load even increased by added years of war still to come?

The annual charges on the debt would now absorb nearly the total revenue of 1914,

Ability to
carry the
burden.

and even before that year it seemed as if taxes had reached the limit. In this war, however, what has seemed incredible has in many instances turned out to be possible. The thrift of the French has long been noted. In France, if in any country, seared as it has been by losses of life and property, the psychology of sacrifice for a future gain will allow the largest part of the excess of production over a low margin of subsistence to be turned over to the state, either in taxes or in subscriptions to funded debt. Already these subscriptions have passed all expectations. No one seems to have realized how large the margin over subsistence has grown in these latter years of mechanical development and of the era of new power. It is out of this enormous surplus that the amazing extravagance of recent years has been made possible; and, if extravagance ceases, to the same extent can it bear the waste of war, without much impairing the forces of production (except by loss in changing to war industries, loss of labor, etc.).

The psychological shock caused by the frightful losses of France, which brings home the obligation of refraining from unnecessary consumption—everything above the minimum needed for health—will yield an incredible fund of savings. The increase of savings even during the war

has been amazing; although much is hoarded. So strong is French thrift¹ that it forms a basis for the estimates of a minister of finance when he needs loans. From such sources, as well as from the earnings of industry and trade, capital has grown until it is estimated that the invested capital of France, as before noted, amounts to \$22,000,000,000, of which foreign securities owned by its citizens are placed at \$8,000,000,000. The income alone from securities owned by the French is stated to be over \$1,000,000,000.² In 1911 the annual savings of France were put at \$600,000,000, of which some \$400,000,000 were available for investment in securities. In trying to find the total fund from which savings can be made, we get nothing very definite. The estimates of total wealth are of doubtful value; but that for France has been given by Helfferich as \$70,000,000,000, and her total income as \$6,000,000,000. As the strength of the desire to save increases, an even larger total of savings may be made out of a lessened fund of wealth. To the savings and investments of France the Treasury must look for the resources to float its loans. If all securities owned by the French were offered in exchange for the debt of France, the whole of that now existing (\$21,000,000,000) could be absorbed at home. Or, if the foreign securities owned in France were sold, they would take up more than one-third of the present enormous debt. Or, again, if one-tenth of the total annual income of France were saved, the whole debt now existing could be taken up in thirty-seven years.

¹ In the thirty years, 1875-1905, in the very period when the burden of taxation had been increased by \$200,000,000, the funds in French savings-banks rose from \$136,000,000 to \$964,000,000.

² Yves Guyot, *loc. cit.*, p. 7.

As with other countries, France can meet the expenses of the war either by taxation or by loans. Until well into 1915 she did not try to increase the already burdensome taxes. Obviously, she must follow the rule not to tax beyond the point where the productivity of industry would be lowered.

Proportion of
taxes to
loans.

The case of France has shown that war levies may form a lower ratio of taxes to loans than in other countries. There can be no fixed percentage for all countries; for internal conditions in each must determine how much taxation the people can bear, and only experience can furnish a guide. For France, her past follies in public expenditure largely decided for her the alternative of large loans relatively to new taxation. Of the total expenditure to the middle of 1917, \$16,600,000,000, the amount met by taxation, according to M. Ribot, is \$2,429,000,000, or 14.6 per cent (as against 25.4 per cent for Great Britain).

By 1916 it became clear that new taxes must be levied sufficient to provide for the interest on the new loans, and serious changes were made in the fiscal system. Obviously, the new sources to be relied upon were the taxes on incomes and war profits. A

New taxes.

A graduated tax on incomes above \$600 was levied, rising from 1 per cent to 10 per cent (on incomes over \$30,000), but granting reductions in proportion to dependents. War profits above \$100,000 to pay 60 per cent; on others 50 per cent. The average profits of the three years before August, 1914, were taken as a basis for arriving at war profits. Customs duties were also doubled, although early in the war import duties on grains and meat were suspended. In effect, France reduced her percentage of direct taxes from 47 in 1913 to 39 in 1916, and increased

that of indirect taxes from 52 in 1913 to 60 in 1916.¹ In spite of the occupation of a part of her territory by the Germans, the revenue of France has about held its own.²

In estimating the ability of France to carry the burden of this gigantic war debt, the middle class and the peasants must be kept in mind. The matter is a psychological one. It is a question of the traits and qualities of her people. If nearly all the margin of goods produced by an energetic people over and above the necessities of life is saved, even the prodigious war debt and the heavy taxation may be successfully carried. One writer³ instances three times in the past two centuries when France "has been completely defeated and left in a state of seeming economic exhaustion—at the end of the long campaign of Louis XIV, at the final overthrow of Napoleon, and at the crushing climax of the Franco-Prussian conflict. . . . Yet, after each of these experiences, the world witnessed the extraordinary spectacle of France promptly resuming her place in the economic system, and in the end displaying a tangible economic power even greater than before."

Psychology
of French
people to be
relied on.

¹ Great Britain did the opposite: increased her percentage of direct taxes from 47 in 1913 to 73 in 1916, and reduced that of indirect taxes from 52 in 1913 to 26 in 1916. Cf. *War Finance Primer* (National Bank of Commerce), by E. R. A. Seligman, R. R. McElvare, and L. Gottlieb, pp. 116-121. For the pre-war policy of France, Germany, and England, see Pierre Leroy-Beaulieu, *Les Impôts et les Revenus en France, en Angleterre et en Allemagne*, Paris, 1914, pp. 55-58.

² Revenue of France (in millions):

1913.....	\$928
1914.....	797
1915.....	777
1916.....	933

³ A. D. Noyes, *Financial Chapters of the War*, p. 205.

CHAPTER V

GERMAN CREDIT OPERATIONS

Credit situation before the war—Financial preparedness—Accumulation of gold—Banking control—Central position of Reichsbank: Its operations—Clearing-house—Joint-stock banks—Darlehnskassen—Municipal loan bureaux—Kriegskredit banks—Mobilization of credit—Shock on the bourse—Suspension of gold payments—Disturbance to industry—Moratorium—Operations of the Reichsbank—Expansion of the note-issues—Campaign for gold—Inconvertibility—Reduction of German production—Breakdown of foreign trade reduces basis of credit—Inflation insufficient cause of rise of prices—Fall in German exchange and its causes—Public debt—War loans—Solvency of credit—Where loans come from—Advantage of home debt—Taxation—Duration of war—Recovery after war.

§ 1. A study of the workings of the German organization of money and credit during the first three years of the war has a special significance not only from the point of view of the student of money and credit, but also from the point of view of the revelations it brings as to the preparations for a war obviously foreordained by the rulers of Germany.

The characteristic concept of the state which has given political thinking in Germany a distinctive quality, has also left its mark on the theories of money and the system of credit. It was certainly an amazing political power which could so thoroughly impregnate all forms of doctrine, assumptions of thought, premises of reasoning, even unconscious prejudices and preconceptions, with the belief in the state as supreme over all the interests of the individual, and even in the expediency of granting

Theories of the state affect theories of money.

to the autocratic representatives of the state practically unlimited powers for the regulation of private industry and social life. Even academic thinking finds its reward in preparing the measures for carrying out an *a priori* conclusion which conforms to the governmental policy. That the government knows best what the student of money and credit should believe is only part and parcel of the general intent to subordinate all activities, physical or mental—even at the sacrifice of what is regarded by us as the moral element—to the success of a measure stamped with the authority of the imperial will. It is, therefore, not strange that there developed a theory that the value of money depended entirely upon the legal action of the state,¹ and that not only the currency but the whole credit organization was made subservient to the policy of the government. In one way or another banking operations were placed under the imperial control. It will therefore be interesting to watch how such theories of money and such governmental interference with credit worked under the storm and stress of an emergency whose gravity could not have been foreseen even by the Germans themselves.

In one respect, however, the credit situation in Germany immediately before the war discloses a marked difference from that in England, France, or in any of the Allied nations. In other than the Teutonic countries the war, when it actually broke out, came as a surprise followed by a stunning shock to credit. Not so in Germany. So far as was possible, everything was foreseen. Meticulous in every detail as was the preparedness for naval and military possibilities, it was equally apparent in monetary and financial anticipations. Indeed, so obvious were the prearrange-

War no
surprise to
Germany.

¹ Cf. G. F. Knapp, *Staatliche Theorie des Geldes*, Leipzig, 1905, pp. x + 398.

ments for the expansion of money and credit that they give convincing testimony as to the intention to be ready for war at the very minute agreed upon by the General Staff. There can be no doubt that leaders in German banking knew that war was foreordained and were advised to put their houses in readiness months before hostilities actually began. The world of credit has something to say as to the ones responsible for bringing on the most unnecessary as well as the most murderous war of all time.

It seems clear that the German policy of aggression had aimed at bringing on the war earlier, but had been held up not only by Italy in 1913, but by the difficult economic and banking conditions of recent years. In effect the military party, not the financial interests, controlled the decision.

Business
interest
against war.

The so-called "moneyed class" had everything to lose and nothing to gain by going to war—as subsequent destruction of wealth, confiscation in the name of necessity, progressive taxes on income and war profits, and forced loans have made patent. It was the lust for power and expansion, the vision of *Mittleuropa*, which triumphed over the natural interests of industry and commerce, whose instinctive promptings were for peace. It was absolutism, not capitalism, which brought unnumbered woes on the proletariat and made of them *Kanonenfutter*. Under a form of government where they can make themselves felt, business interests have frequently kept ambitious politicians from going to war.

Since the Balkan wars the condition of credit in Europe (and in America as well) had been disturbed. Germany had never accumulated so much capital as France or Great Britain, and in her recent industrial expansion she had so far overdrawn on her domestic funds that she had been

forced to borrow from other countries, even from the United States. Her credit resources were strained. It was this weak condition of her credit that forced Germany, when French bankers began to withdraw their deposits from German banks in the Moroccan complications of 1911, to lower her demands, if war was to be avoided.¹ The uneasiness of investors since 1905 and during the two Balkan wars, and the consequent uncertainty in money markets, was due to a realization by dealers in international credit that the possibility of a general European war depended on the course of events in the Balkans and how they affected Germany's plan for extending her control over the route to the Persian Gulf. While England and France had warning enough of Germany's obvious preparedness, but had never been willing to admit the lengths to which Germany was ready to go, German financiers were fully alive to what was impending, and acted accordingly. In well-informed centres of credit there could be little doubt that Germany was ready to risk even a general European war by supporting Austria-Hungary against Russia and the Slavic elements which obstructed the way to Constantinople. The only hope of preventing war was the yielding of Russia to Austria—a submission to the plans of Germany working through Austria and Turkey. We all know now what happened when Russia refused to yield.

Using the conflict with France over Morocco as a means of obtaining additional credits, large increases were made in the artillery, cavalry, and aviation branches of the army in 1912. But the formation of the Balkan League and the knockout blow it gave to Turkey were directly responsible for the defense bill introduced in April, 1913, which added

Weakness of
German
credit.

Non-recur-
ring tax
of 1913.

¹ Cf. *supra*, p. 154.

some 136,000 men to the army and the collection of an immense amount of material.¹ This heavy expenditure was made possible by the *Wehrbeitrag*, a special, non-recurring tax, intended to raise \$250,000,000 on incomes and real property. The tax on the latter began with 0.15 per cent on property above \$2,500, and rose by degrees to 1.5 per cent on that above \$1,250,000. The income tax started with 1 per cent on incomes over \$1,250, increasing to 8 per cent on incomes over \$125,000. The assessments, under the non-recurring feature of the law, were to be met in three instalments, payable in 1914, 1915, and 1916. From the first instalment the imperial Treasury received about \$75,000,000 in the spring of 1914. The remaining payments disappear—like an underground river—under the cover of the enormous war finances. With this and other taxes, in all, over and above ordinary levies in the budget, a total of new taxation amounting to about \$437,000,000 was imposed in the three years before the war.

If the imposition of the *Wehrbeitrag* were not a sufficient rattling of the sabre, financial Europe should have known of German preparedness through the attempts of Berlin to collect gold. It was well known in Vienna that for eighteen months before the war Germany was persistently gathering in gold. The purchase of foreign exchange in order to control the movement of balances in gold is carried on to a nicety in Europe.² It was the beginning of a well-thought-out scheme to apply the psychology of large gold resources to the support of her credit organization. There was recognition of

Early
accumulation
of gold.

¹ Cf. R. H. Fife, Jr., *The German Empire Between Two Wars* (1916), pp. 11–12, 36–37. See also M. Chase Going, "German War Finance," *Journal of Political Economy*, June, 1916, p. 515.

² In 1907 the Reichsbank bought gold bills amounting to 268,100,000 marks; but in 1913, 832,500,000 marks.

the general belief that a great store of gold would create confidence in the stability of her currency system. Even though it was already predetermined to give up redemption in gold, nevertheless there must have been reliance on the efficacy of the mere possession of gold, even if it were kept as a national hoard, to maintain confidence. After all, the mere possibility of redemption arising out of the existence of gold reserves has always had some supporting influence on the value of even inconvertible paper. Nevertheless, this acknowledgment of the effect of a popular conviction—call it prejudice, if you will—of the effect of gold redemption (although not immediate) on the value of paper money goes counter to the theory that the state can regulate its value by law. If the power of the state is paramount, why depend on possible redemption? But in the field of money and credit, as in no other sphere of thinking, one cannot expect to find consistency, least of all among public men.

The high regard for the efficacy of gold to be kept as a "war chest," although rather mediæval and contrary to modern ideas of keeping money at work in productive uses, has held sway in many countries, and persisted in Germany, in spite of many doubts as to its existence, in the imperial war treasure supposed to have been kept in the Julius Tower at Spandau. Wherever it was kept, there is now no doubt as to its existence, nor that it was a part of the old Prussian traditions. When the German Empire was founded, Prussia turned in her war chest of accumulated coin to the imperial Treasury. Moreover, \$30,000,000 in gold coin had been taken from the French indemnity of war and added to the war chest at Spandau. This fund was under the management of the chancellor and the imperial debt commission, to be used, with the consent of the Reichs-

War chest.

tag, only for mobilization.¹ In addition, by the Act of July 3, 1913, the war chest was to be doubled by the sale of imperial treasury notes for gold. Before the war broke out some \$21,000,000 in gold had been obtained under this Act, partly by direct importation and partly out of the circulation, so that the war chest amounted to about \$51,000,000 in July, 1914.

The retention of gold was to be furthered by measures tending to increase the control of the Reichsbank over gold, such as the Act of 1906, permitting the issue of Reichsbank notes in denominations of 50 and 20 marks (the lowest note previously having been 100 marks), issued by any branch, but redeemable only at the head office in Berlin. The object was to encourage the use of notes instead of coin. Moreover, in 1909 the bank-notes were made a full legal tender. Also, imperial treasury notes (*Reichskassenscheine*) were issued in denominations of 10 and 5 marks. In 1913 these treasury notes were increased from 120,000,000 to 240,000,000 marks. Inasmuch as they were a legal tender and counted as lawful cash in the one-third cover held by the Reichsbank against its notes, the effect of this enlargement of treasury notes meant a possible increase of 360,000,000 marks of bank-notes, without a technical violation of the law as to reserves. In July, 1913, also, the chancellor was authorized to coin \$30,000,000 in silver. These laws were a part of the preparation for war and for the foreordained time when the paper might be irredeemable. As a consequence, the gold stock of the Reichsbank rose from \$258,000,000 in July, 1911, to \$339,000,000 in July, 1914.

Control over
gold.

Yet it seems to have been accepted by financial authori-

¹ Cf. M. Chase Going, *loc. cit.*, p. 515. I have freely drawn on this writer for many facts in this chapter.

ties that the coming war should be carried through with an inconvertible paper. This surprising and dangerous conclusion was not, of course, based on any precedent of the Franco-Prussian War, because at that time no Reichsbank, no German Empire, existed. It may, however, have been suggested by the experience of France in and after that war, when specie payments were suspended and the notes of the Bank of France saved from any serious depreciation during inconvertibility. But the difficulty of France at that time was a very different one from this into which Germany was about to plunge. Perhaps the only explanation, after all, was a conviction of German invincibility and that the war would be very brief. The test of this questionable theory of money, however, was soon likely to prove very disquieting.

The government, also, was, through the Reichsbank, strengthening its hold upon the joint-stock banks. With the development of industry and the growth of wealth in

Germany they had been waxing rich and becoming more and more independent of the Reichsbank. Such a tendency the autocracy set out to counteract. The banks were obliged, in 1906, to publish their accounts every two months. Also, effective pressure was brought to bear upon the banks to keep larger deposits with the Reichsbank. In the dubious days of 1907, the Moroccan crisis of 1905-1911, and the Balkan wars, it was found that the joint-stock banks had locked up their capital in the stocks of industrial concerns or in three months' paper which had to be renewed.¹

If war came, and the bourses were closed, their stocks could not be sold; they could not call in their loans without ruining their customers; nor could they expect re-

¹ Cf. A. Loveday, "German War Finance in 1914," *Economic Journal*, March, 1916, pp. 44-56.

discounts from the Reichsbank on paper which could not be liquidated at its maturity. The danger, in truth, came from assets based on ventures not of a sort to be undertaken by commercial banks creating demand liabilities: the confusion of investment and speculation with legitimate banking.

Preparations of this sort were parts of a carefully worked-out plan intended to anticipate every possibility of the crisis in credit which might be expected when the coming war broke out.¹ It was intended to supply credit to all classes of the people for all the necessities which might arise in the emergencies due to the sudden shock of war. Through what agencies these purposes were actually carried out we shall soon learn.

§ 2. The cluster of institutions which make up the credit organization of Germany are, of course, very similar to those in other European countries, and yet they have a flavor quite characteristic of the German soil in which they have grown. Being of Prussian origin and shaped by the imperialistic influences which established the empire at the close of the Franco-Prussian War, it was to be expected that governmental control would be strongly in evidence.

The central Reichsbank, which has dominated the credit system since its creation in 1875, the whole of whose capital is provided by private persons, was intended to be the means by which all other agencies of credit were to be made subject to the will and policy of the Kaiser through his chancellor. Remembering that in the political life of the

Reichsbank
under
imperial
control.

¹ So definitely were coming events heralded that writers early gave their attention to prevision of the problem. Cf. Karl Helfferich, *Das Geld im russisch-japanischen Kriege* (1906); Jacob Riesser, *Finanzielle Kriegsbereitschaft und Kriegsführung* (1918).

empire the Bundesrat, or federal council, controlled by the princes and the nobility, is the centre of power, while the parliament (Reichstag) is not only limited in power but in its franchise, which aims to keep the majority in the hands of the ruling class, we note that the *Curatorium*, or body of supreme control over the Bank, has for its chairman the chancellor of the empire, the personal appointee of the Kaiser. The second member, usually the Prussian minister of finance, is also appointed by the Kaiser, and the three others by the Bundesrat out of its own membership. The chancellor has practically unlimited power. On one occasion he forbade the bank to accept Russian securities as collateral. Thus the banking, may be made subject to the political, policy.

The actual management of the bank is in the *Direktorium* of nine members (a president, vice-president, and directors), who are appointed for life by the Kaiser on the recommendation of the Bundesrat. The stockholders are permitted to select a body of fifteen members (the *Central-Ausschuss*), who may give advice to the management through a committee. Thus the Reichsbank, although supposed to have been modelled after the Bank of England, is not, as is the latter, an independent bank in the selection of whose officers the government has no vote.

Inasmuch as credit operations in Germany are carried through, at least until partly modified by recent agitation, mainly by the issue of bank-notes, the expansion of business and credit is necessarily accompanied by an increase of the note-issues. The control of the situation, therefore, implied a concentration, sooner or later, of the exclusive right of issuing bank-notes in the Reichsbank.¹ These notes are to

Expansion
of credit
through
bank-notes.

¹ Of the original thirty-two independent banks of issue in 1875, only four now continue to put out notes: Bayerische Notenbank at Munich, Sächsische Bank

be covered to one-third of their amount by lawful German money, imperial treasury notes, gold in bars or foreign coin (1,392 marks to the pound fine); and the remaining two-thirds by discounted paper having not more than three months to run (Lombards, or loans on securities, not being allowed as cover for the notes). As an improvement on the rigid system of the Bank of England, no limit was set for the maximum issues; but if the notes should exceed the one-third cash cover, a certain contingent of notes (550,000,000 marks, and at the end of the quarters in March, June, September, and December, when currency was in special demand 750,000,000) were allowed without tax; but an excess over this contingent would be taxed at the rate of 5 per cent per annum.¹ In this way a certain check was imposed on the issue of uncovered notes; but this limit could be passed if the need were great enough to warrant the tax. That is, the taxation of notes beyond the contingent was a method of introducing flexibility into the circulation, yet working under a brake to prevent excessive issues. On the other hand, the requirement of a one-third cash cover was inflexible, and set a definite limit on the notes outstanding, forbidding an increase of notes unless accompanied by the due proportion of cash. These two provisions, different in their operation, have the same general purpose. As the uncovered issues expand under the demands of

Kontingent.

at Dresden, Badische Bank at Mannheim, and the Württembergische Notenbank at Stuttgart, whose total circulation is only about \$35,000,000. Cf. *National Monetary Commission*, No. 408, p. 388.

¹ To arrive at the basis for the tax, add together the specie, gold, silver, copper, and nickel coins; the imperial treasury notes; the *Kontingent*, and the notes of other banks held by the bank. Then subtract the sum from the total note-issues. Inasmuch as a withdrawal of the issues of other banks allows the Reichsbank to enlarge its issues in principle, it may increase the amount of its untaxed notes by the amount of the notes of other banks in its possession. The notes of other banks were not included in the one-third cash cover.

business, the cash reserve must change. Since the need for credit and notes fluctuates with economic conditions in the empire, it is the uncovered issues which give the desired flexibility. It may happen in a period of prosper-

ity that the uncovered issues are expanding at the same time that there is a demand on the

**Flexibility
of issues.**

Reichsbank for gold needed for small payments to satisfy increasing transactions. Thus the highest and lowest volume of the notes may vary by a contingent of \$137,000,000 to \$187,000,000, but it must yet conform to the requirement of one-third cash cover. Neither the cash nor the commercial paper, however, is set aside as a special part of the assets pledged to the redemption of the notes, so that the note-holders have no prior lien upon the assets in preference to other creditors. Hence the credit of the notes depends entirely upon their convertibility¹ into coin. The proportion of cash to the notes has usually been about 70 per cent, falling to about 40 per cent in August, 1914. Obviously, the character and convertibility of the German currency rests entirely upon the coin holdings of the Reichsbank. If the notes of this Bank depreciate, the standard of all German prices and contracts depreciates. Thus, it is one function of the Reichsbank to control the supply of money in the empire, and by its power over the gold supply to maintain its credit at home and abroad.

Its chief function, however, is to discount, mainly for other banks, accepted bills of solvent persons, or companies, having not over three months to run and bearing at least two, and usually three, good names. Since loans are sought from the Reichsbank chiefly to replenish the reserves of other banks, or to convert short-time paper into cash, it is obvious that an increase of loans is di-

¹ Cf. Dunbar, *Theory and History of Banking*, second edition (1907), p. 236.

rectly followed by an increase of that demand liability which German usage requires—namely, bank-notes. With us loans are followed by deposits (on which checks are drawn); but the German public make very little use of checks. The system of lending on collateral (Lombards), such as securities, precious metals, merchandise, and the like,¹ on which a higher rate of discount is exacted than for short-time commercial paper, is a part of the demand for credit and notes. The deposit item at the Reichsbank is built up largely of funds to support the system of transfers. The volume of notes, therefore, is closely related to the demand for loans, and fluctuates with it. The Bank is the central source of both money and credit.² The method of taxing notes is not alone sufficient to regulate their volume, which is so directly related to the demand for credit and to the condition of the money market. Consequently, the rate of discount is used, as by other great banks, to check the increase of credit and the issue of notes, as well as to attract the flow of gold. It is to be said, in this connection, that the German insistence on settling transactions by money, rather than by credit devices (such as our deposit-currency), is not economical, and hence an increase of industrial activity demands that more than is necessary must be invested in the mechanism of exchange.

Credit
operations
of the
Reichsbank.

¹ Lombard loans are made on gold and silver; government and municipal issues, stocks and bonds of German railways; securities of foreign governments, and foreign railway obligations if guaranteed by the state; satisfactory bills receivable; bonds of mortgage companies (not real-estate mortgages); and merchandise within the empire.

² In view of the suspension of specie payments in this war, and the depreciation of the notes, the following statement on the twenty-fifth anniversary of the bank in 1900 is significant: "The notes issued by the bank form so large a part of the total German currency that a refusal to redeem them for sterling money and the consequent depreciation of the notes would bring about a collapse of the German monetary system." *Nat. Mon. Com.*, No. 408, p. 202. Are we to conclude, in 1917, that the German monetary system has collapsed?

It might be urged, on the other hand, that the use of actual money is economized by the system of transfers (*Giroverkehr*), so as to accomplish all that is obtained by

a deposit-currency and a system of clearings.
Transfers.

To those having deposit accounts at the Reichsbank transfers without charge are made (by red check) from one person or locality to another through the 500 branches. Indeed, balances are kept by other banks at the Reichsbank almost entirely to allow of transfers.¹ By 1900 the total transfer transactions amounted to about \$40,000,000,000. To such an extent was the use of money economized. Apart from such a service, the system of transfers is highly regarded, not only because the balances kept to support transfers increase the disposable funds of the bank, but also because it helps to place the bank in a position to dominate and control the money market.

So long as payments are made by persons, or banks, through one central bank, the system of transfers would serve the purpose of a clearing-house. But if there are several great institutions, each with a large

Limited use
of clearing-
house and
checks.

clientèle, then many claims against other banks come into the hands of some one bank; so that a clearing-house is an imperative need for offsetting claims between a number of banks and avoiding the wasteful transfer of actual money. In Germany the payment of claims between banks is carried on through the transfer system of the Reichsbank, and thus there is little chance to induce the public to substitute

¹ The Deutsche Bank reports a practical illustration as follows: "Our branch in Bremen, for instance, wants money when cotton shipments start, and the money is transferred to them. The importers in Bremen sell the cotton to the large manufacturers. When they get the money it comes back to us. The Reichsbank, in the transfer of funds, merely acts as intermediary for the other banks who do the business." *National Monetary Commission*, No. 405, p. 386.

checks for cash payments.¹ In Hamburg the check system has obtained a good foothold. In 1906 an Act was passed legalizing the status of the check; but even then the debtor still makes payment for large sums by an order on his bank in a letter of instructions to transfer the amount to the bank of the creditor; while cash is used in the settlement for small personal accounts. Instead of using checks, as with us, to pay the tailor, it is the practice to use the transfer system. Nevertheless, in 1883 the Reichsbank had established a system of clearing offices which are now ten in number.² The representatives of the member banks meet once a day under the leadership of the Reichsbank at a clearing-house (in Berlin, at the Reichsbank) at a fixed hour to exchange claims; items are then taken back and examined at each bank, and at a second meeting debits and credits are ascertained. Each creditor first clears directly with his debtor; then final balances are settled, not by cash, but by the transfer system through the Reichsbank (which is also a creditor and debtor at all clearing-houses). Checks are not likely to supersede the transfer system between different places.³ Thus, the transfer system and clearing-houses together aim to serve the purpose of the deposit-currency in England and the United States.

Under the ægis of the Reichsbank flourish 421 joint-

¹ One main reason why the general public are indifferent to the introduction of checks is the efficiency and convenience of the German money-order system. The letter-carrier receives the money and gives a receipt for it; at the post-office he makes out and mails the order to the place desired; there the payee receives from his letter-carrier the money at his own door.

² In 1900 at Berlin, Frankfort, Stuttgart, Cologne, Leipzig, Dresden, Hamburg, Breslau, Bremen, and Elberfeld. Others have been established since.

³ In 1900 clearings amounted to about \$7,500,000,000, while the combined transfers and clearings were about \$48,000,000,000. A business of \$34,000,000,000 was transacted without the use of specie by book entries and transfers. Cf. *National Monetary Commission*, No. 408, p. 288.

stock banks, with a capital (in 1907) of \$880,000,000, with deposits and current accounts of \$2,444,000,000,

which furnish credit to the general public.

Of these, six have a capital of \$311,000,000.¹

Even more than in France these large private institutions do not confine themselves strictly to commercial banking, but venture widely into the underwriting of purely business enterprises, at home and abroad, such as electric and water-power systems, the building of electric and steam railways in Russia, Asia Minor, and South America, or join in the expansion of German foreign trade under the intimate direction and aid of the government in all parts of the world. Such banks gave credits to the United States on shipments of cotton, copper, or wheat, and accepted long bills drawn on them by the shippers; similar operations went on with Austria, India, or Russia; and they have had large dealings with London on shipments of merchandise. In the foreign field the Deutsche Bank covers Turkey, while the Dresdner Bank is occupied with the transactions of the Krupps. In general these banks feel a responsibility for fostering German industries and for aiding private and public schemes for the development of the empire. Consequently, they must have many assets which could not be easily liquidated in times of serious international complications. Usually they carry very small reserves, perhaps from 2 to 10 per cent, relying on rediscounts at the Reichsbank whenever in need of cash. A supply of short-time commercial paper is kept in lieu of ordinary reserves. These banks, also, lend heavily on bourse transactions and keep

¹ In the order of their size, these are the Deutsche Bank, Dresdner Bank, Disconto-Gesellschaft, Bank f. Handel u. Industrie in Darmstadt, Schaaffhausen'scher Bankverein, Berliner Handels-Gesellschaft. The Königliche Seehandlung is owned by Prussia, having been founded by Frederick the Great to aid the shipping and linen industries.

balances at the Kassenverein, or clearing-house for stock-exchange dealings.¹

§ 3. Immediately on the outbreak of war the normal organization of credit was supplemented by the passage, August 4, 1914, of the measures already prearranged for this emergency. Although passed on that date by the Reichstag, the copies posted that evening in Berlin were dated August 2, showing that the mobilization of credit was only two days late on its schedule.

Of these measures, the Act establishing Darlehnskassen² had the most significance for credit and the monetary circulation. These loan bureaus, based on the theory of the pawn-shop, were first tried in Prussia in 1848, and because of that experiment were Loan
bureaus. used again in the wars of 1866 and 1870. In the Prussian experience of 1848 the amount of notes issued was largely governed by the financial necessities of the government. The policy of these institutions in 1866 was severely criticised because of a fear that the notes would become a means of increasing the permanent debt by a secret use for government purposes. They are now under the control of the Reichsbank. There is a general administrative board in Berlin, and a board of directors for each bureau, of which one is appointed by the chancellor. This imperial representative has the power to fix the amount of loans on various securities and to decide what loans may be granted. The profits are to be set aside to aid in the redemption of the notes which are to be retired

¹ Besides commercial banks there are, of course, many well-developed mortgage, land, co-operative, and savings banks.

² *Reichsgesetzblatt*, August 4, 1914, p. 340. For a good account of these bureaus, cf. W. Lotz, *National Monetary Commission*, No. 508, pp. 467-478, and M. Chase Going, *loc. cit.*, pp. 519-522. The German text of the Act is given by J. I. Jastrow, *Im Kriegszustand* (1914). For the English translation, cf. Appendix III, E.

after the close of the war. As an evidence of preparedness, it may be noted that, even before the passage of the Act, the personnel of the ninety main branches had already been appointed.¹

The bureaux granted credit on other than a strictly commercial basis, and to the borrower gave a demand liability in the form of paper money (*Darlehnsskassenscheine*). In effect, these institutions form an extension of the collateral loan department (Lombards) of the Reichsbank.

They were of great aid in placing government loans, by opening the sluices of credit to those who had less liquid assets than were required by the large banks and the Reichsbank. They enabled owners of securities and stocks of goods to coin them into a form of money.² After the stock exchange was closed, this was an effective means of raising money on securities.

There were five classes of collateral allowed:

1. On obligations of the empire or of a German state, if registered with the department of public accounts, loans could be made from 70 to 75 per cent of the quotations on July 25, 1914. If the borrower should be unable to repay the loan, or interest, when due, the loan bureau could sell the collateral without recourse to the courts.

Kinds of
collateral
accepted
for loans.

2. On local loans and stock in land and mortgage banks, and other trustee stocks quoted in the official list, to 70 per cent.

3. On other trustee stocks, non-trustee stocks quoted in the official list, and so-called home *Ultimopapiere*, having a fixed return, at 60 per cent.

¹ Loveday, *loc. cit.*, p. 48. At the end of 1915 there were 99, with 149 branches.

² In France, in 1830 and 1848, special credit agencies of a similar character were established. In 1848 loans on merchandise were granted. But in no case were these institutions (*comptoirs d'escompte*) allowed to issue notes.

4. On foreign *Ultimopapiere*, 50 per cent.

5. On other securities with a varying rate of return, and non-perishable merchandise, 40 per cent or more. The goods pledged may be agricultural, mineral, or industrial products located within the empire, and, although stamped with a government seal, they are left in the hands of the owners.

The clientèle of the loan bureaus were private individuals, co-operative societies, banks, and savings-banks, in need of cash. The rate of interest charged was higher than the bank rate, actually $3\frac{1}{2}$ per cent (but for advances to buyers of the first loan 6 per cent). The loans ran from three to six months, but were renewable, and were for sums not less than \$25.

The loan bureau notes (*Darlehnskassenscheine*) were in the nature of an emergency circulation based on the pledge of securities and goods. Although not a full legal tender, they must be accepted at par by the imperial and state offices. At first issued in denominations of 5, 10, 20, and 50 marks, after August 31, 1914, because of the scarcity of small silver, they were put out for 1 and 2 marks. Their value was supported by the Reichsbank, which accepted them on equal terms with imperial treasury notes and counted them as cash in the reserves of the Bank; but they are included in the reports of the Bank under treasury notes. In practice, a part of the notes have been sent in to the Reichsbank and exchanged for Reichsbank notes.¹ Originally authorized to the amount of \$375,000,000, they have shown a tendency to increase with the placing of new war loans, and at the end of the third year of the war were outstanding to the sum of \$1,265,000,000.

Clientèle.

Character of
the loan
notes.

¹ In the autumn of 1914 the Reichsbank held the largest part of them, or over \$235,000,000. In July, 1917, the amount had fallen to \$136,500,000.

In a time of emergency, under the German system of credit, it is to be remembered that assets composed of loans on collateral, or securities, cannot be included in the two-thirds cover allowed behind the Reichsbank notes. Therefore, the Reichsbank would be overwhelmed by the enormous demand for loans on securities certain to be precipitated by a serious crisis. Hence the Darlehnskassen were again established, supposedly as a temporary device for creating an emergency circulation based on collateral (Lombards). Having as their purpose to mobilize a large part of the invested wealth of the country by coining it

Purpose. into a means of payment, they gave the public the power to meet their obligations in money, at a time when the normal kinds of money were scarce and goods were not easily salable, thus in theory to avoid a moratorium, and to enable subscribers to war loans to pay for them in "cash." Of course the very serious question as to their real value still remains. Although they are guaranteed by the government, no gold reserve is held for their redemption. Hence their true worth must depend on the future value of the goods and securities pledged as collateral.

When A obtains loan notes for a credit based on goods or securities in order to pay for an imperial bond, the government becomes the possessor of the loan notes,

Basis of value for the loan notes. which are in due course paid out for war supplies. The war contractor passes them on as wages of labor or in payment for materials and goods. They have thus entered into general circulation. But in from three to six months A must pay back his loan. If he is a war contractor he can use his war profits (when not taxed) in the form of loan notes to pay off his debt; but in that case he has received a government bond for the profits of his business. But if, due to the disloca-

tion of trade and the absence of foreign markets, A's assets are not liquid, he will have obtained from his business no cash as a means of paying off his loan. He has, however, his imperial bond, which he can use as the basis for a new loan to get loan notes with which to pay off his original maturing obligation at the loan bureau. That done, he regains possession of his former collateral; but he is in debt for the imperial bond, which he has now pledged for his new loan. He is worse off than before. He has his former unliquid assets with which to pay his debt to the loan bureau for the bond he bought. Consequently the bond is in fact only as good as the securities and goods with which A can redeem it. That is, the bond is supported by unliquid assets. A has by the process enabled the government to buy and destroy war supplies, and has mortgaged his assets for the amount of destruction represented by the purchased bond. The government in the future must take in taxes from the assets of A and others the means to pay off the bond. The loan notes, of course, have added nothing, and have been only a means of shifting the ownership of wealth. The system has provided the mechanism for a very dangerous pyramiding of credit based on a minimum of assets not of the highest quality.

Supplementary to the loan bureaus there were *städtische Darlehnskassen*, established by municipalities, which made loans to small retailers and hand-workers through their co-operative associations, from three to twelve months, at a higher rate of interest than charged by the state institutions. The associations and interested persons contributed a guaranty fund to which the municipality usually added twice as much. Loans were granted on assets satisfactory to a credit board made up of city officials. In the main these were

Municipal
loan bureaus.

securities which were unavailable for credits at the loan bureaus. As little discrimination was exercised between those who wished a credit for productive purposes and those unable to meet their obligations, many bad debts were made. These municipal institutions obtained rediscounts from the Reichsbank and the Kriegskredit banks.

The expansion of credit to cover other than liquid assets, so that the possessors of almost all kinds of wealth could coin it into means of payment through the loan

Swollen
credit
inflates the
circulation.

bureaus, necessarily resulted in an increase in the volume of the circulation, irrespective of any need of a larger medium of exchange in trade. Thus the swollen credit meant a swollen

circulation, not only inconvertible but based on assets that were not liquid. Loans by the Reichsbank and the loan bureaus both resulted in an increase of forms of money; but this was not true of another war device, known as the Kriegskredit banks which could not issue notes. These banks were organized, unofficially, all over Germany. Their capital, varying from several million dollars to small sums, was provided by the large private banks, boards of trade, and even by states and municipalities. In Berlin the Deutsche and Dresdner banks joined

Kriegskredit
banks.

with the board of trade to establish a Kriegskredit bank, on August 15, 1914, with a capital of 18,000,000 marks. Elsewhere capital

was partly provided by a state, as in Saxony, or by a municipality, as in Frankfort. These banks are managed by a board chosen by those who furnish the capital. Inasmuch as they cannot issue notes, they obtain cash by rediscounts with the Reichsbank, which agrees to loan to an amount four or five times the sum of the guaranteed capital. While the Reichsbank aided the larger business

houses and banks, and the loan bureaus those holding securities or goods, the Kriegskredit banks had an essentially industrial character and served the small tradesmen or those without collateral who could furnish only their personal obligations. Loans were made on a dealer's stock of goods, or on a personal note guaranteed by two respectable persons. Also, ordinary discounts were made; a seller of goods drew on the buyer, the buyer accepted the bill, the seller discounted it at the Kriegskredit bank, and the latter rediscounted it at the Reichsbank, since it had the required three names. In addition book credits were granted to customers who mortgaged to the Kriegskredit bank their good bills receivable; the bill drawn on the bank by the customer was accepted, and the bank discounted its own acceptance at the Reichsbank.

In such wise it was planned beforehand to send streams, and even little rills, of credit to all classes of needy persons in every part of a thirsty land. By arranging that every one in the emergency of war could get a means of payment, every one could meet his obligations in "cash"; and thus it was intended to avoid the resort to a moratorium. It remains to be seen how this carefully devised provision bore the test of unexpected difficulties.

§ 4. The mobilization of credit jumped with the mobilization of the army. It is now quite clear that it was expected to capture Paris in a few weeks; then deal separately with Russia; have a short, victorious war; levy no war taxation; and repay all expenses of the conflict, as in 1870-1873, by imposing heavy indemnities upon the conquered nations. We now all know how that plan miscarried at the Marne. But there have also been some financial Marnes.

In spite of all precautions, the outbreak of war nevertheless brought on the inevitable shock to the monetary and credit organization. Not even well-organized Germany, with all her forethought, could free herself from the economic interdependence of trade and credit between all commercial countries; and as German exports and imports, except with small neutral states, practically ceased, while domestic production of goods was also faced with violent readjustments, credit, which is based on transactions in goods, could not possibly be saved from shock. If goods could not be produced and sold as before, business men could not meet their engagements, no matter how much the circulation was expanded. Without doubt the shock was more or less expected; for it was minimized by the systematic reduction of commitments, by collecting in anticipation all possible sums due from London, Paris, and Petrograd, and by the persistent accumulation of gold reserves to facilitate the granting of loans in an emergency. Early in July the Reichsbank urged the Berlin banks to increase their reserves to 10 per cent, and the provincial banks to 8 per cent, nearly double the sums usually kept.

As elsewhere the bourse first registered the seismic shocks to credit. After the assassination of the Grand Duke Ferdinand at Sarajevo, June 28, 1914, and during July the Berlin market for securities showed great uneasiness, while stocks had been falling seriously in Vienna. Large selling orders hung over the market. On July 23, the day¹ after Austria sent the ultimatum to Serbia, it was realized in Berlin that the war could not be localized, and a panic broke loose. On the day of Serbia's reply, July 25, securities fell from 6 to 20 per cent under heavy liquidation. On

Shock to
credit when
war came.

Effect on
the bourse.

¹ Cf. Chronology, p. 79.

July 29, the day after Austria declared war on Serbia, no stock transactions were carried on except for cash, and on July 31, war with Russia being inevitable, all operations on the bourse ceased.¹ July settlements for stock accounts were extended by bankers. Inasmuch as securities were now unsalable, the Reichsbank announced its willingness to make loans, as before, on securities (Lombards); but later such loans were assumed by the loan bureaus.

Then ensued a currency panic. Most persons lost their heads, and a rush began for money to be hoarded. Depositors started runs on the banks, especially for gold. On one day, August 3, the Berlin savings-banks lost over \$230,000,000. As a result of hoarding, the small coins disappeared from circulation. The chancellor had been authorized in July, 1913, to coin \$30,000,000 in silver, of which \$1,500,000 had been coined and was now issued through the Reichsbank. The government then supplied the Bank with nearly an equal amount of token coins. Nevertheless, the Bank lost, between July 23 and October 7, 1914, some \$81,000,000 of its small money. The disappearance of fractional coins forced the issue of small denominations of imperial treasury notes (ten marks) and (after August 31) of loan-bureau notes for 1 and 2 marks.²

**Hoarding
of money.**

As in London, the private banks stopped payment in gold, but in Germany they kept on in their way and went entirely over the precipice. Crowds besieged the Reichsbank to get its notes converted into gold. Thereupon the bank, after losing a considerable sum of gold in one day (and in the week

**Suspension
of gold
payments.**

¹ Transactions, but only for cash, were resumed in November, 1915. There are as yet no official quotations published.

² By the end of 1914 there were of loan-bureau notes outstanding: 1 mark, 65,500,000; 2 marks, 185,800,000; 5 marks, 225,400,000.

ending July 31 over \$25,000,000), gave notice, July 31, that it would no longer pay gold. At this parting of the ways we find a striking contrast between the policy of England and Germany, which was afterward to lead to momentous results. On August 1 the Reichsbank posted notices in Berlin calling attention to the fact that, since the Reichsbank notes had been made a full legal tender in 1909, they were as good as gold in making payments, and that it was useless to present them for redemption. On the afternoon of that day the Reichsbank ceased to redeem its notes in gold. As soon as specie payments were suspended, bank-notes, as compared with gold, at once went to a discount in the shops. Then economic laws were met by the force of absolutism. The military governor of Berlin in summary fashion declared the notes were a full legal tender and announced that any shop refusing to take them at par would be punished by confiscation of goods. But what was to prevent the shop

Rise of
prices.

from raising its prices as the notes depreciated? The autocratic government then resorted to the mediæval device of fixing prices;

but prices have since risen, in spite of such control, over 75 to 100 per cent above the normal level. Other things than the quantity of money and its regulation (such as limited supply, wages, and materials) have been at work on German prices.

The fundamental difficulty, however, in such a crisis was that of making a satisfactory disposal of securities; and above all there was the breakdown in the normal production and exchange of goods, on which depended

Disturbance
to industry.

the ability to meet obligations at their maturity. The harvest of 1914, which was good, was largely finished before war was declared. But industries were at once crippled. Concerns not engaged in produc-

ing war supplies were not operating to more than 25 per cent of capacity, and many were closed.¹ Probably 50 to 75 per cent of the workers were called to the colors. It is said that one-third of the men in the iron industry were sent to the front. The skilled artisans were in the army or in munition factories. In the woollen trade the government had requisitioned all the combing and spinning mills for military uses. Skilled men to handle the new crop of sugar were scarce. The transportation of goods was seriously interrupted; but after mobilization, when the railways were again ready for traffic, the producers found their orders for goods cut down, and, of course, had no foreign orders. Moreover, the crisis led to a greatly reduced demand for articles of luxury, the producers of which thereby lost their market. In the early months of the war there were many laborers out of employment,² so that their buying power was lowered. Foreign trade was reduced to that carried on with such neutrals as Norway, Sweden, Denmark, Holland, and Switzerland,³ although imports in considerable amounts from the United States came in through these neutral countries. The merchant marine was shut up in home or foreign ports, there being according to report more than

¹ The Siemens-Schuckert Works, even before the landsturm was called out, lost 40 per cent of their men on mobilization. The Humboldt Steel Works, near Cologne, employing 4,000 men, were closed early in August, as were nearly all the great iron-works in the district between Düsseldorf and Duisburg. Works in Poland were also closed early. Later many of such concerns were diverted to the production of war supplies.

² In Berlin, in September, 1914, it is reported that 100,000 men were unemployed because of shut-downs. Of wood-workers over 50 per cent, and of textile operatives over 30 per cent, were out of work.

³ Early in the war Germany laid in through Switzerland large stocks of cheese, fruits, leather, and chocolate, by which the Swiss could pay for such German products as coal. At present German coal is scarce and not easily got by Switzerland. Of course, before Italy entered the war, goods were sent to Germany from Italy through Switzerland.

one thousand idle ships in Hamburg alone. Consequently, the normal production of goods for civilian consumption was very seriously interrupted; and the importation and exportation of goods and securities, on which foreign credits mainly depended, were confined to narrow limits. A heavy liquidation of foreign securities held by Germans had been going on long before the war, and German securities did not have a favorable market even in neutral countries.

In spite of just such inevitable handicaps to the basic forces of credit, it was the German plan to enable nearly all forms of wealth to be coined into a current means of payment through banking credits. Every man suffering from the dislocation of trade, whose goods were unsalable, or whose collections had ceased, was by credit institutions given forms of money which enabled him to pay "cash." By an expansion of credit, based on questionable assets, and followed necessarily by an expanded circulation, it was expected to escape whatever opprobrium attached to a moratorium.¹ It may be that greater disadvantages may come from the liquidation in the future of the assets behind this swollen credit than has been gained by the possible avoidance of a moratorium. But, if the situation in fact proved too big to be controlled, and if a moratorium was necessary after all, the management of the system of credit was certainly open to criticism.

Expansion
of credit.

Although no general moratorium for all debts was pro-

¹The writer of the following extract (quoted by M. Chase Going, *loc. cit.*, p. 524), dated August 15, 1914, had a great but misplaced confidence in the possibility of avoiding a moratorium: "If we succeed in coming through the next twelve or fourteen days without a moratorium, in a time when all our neighbors directly or indirectly affected by the war have proclaimed a moratorium—the once so financially strong England among them—the result will be the greatest economic title to fame for Germany, which will naturally find expression in the strengthening of our credit in the whole outside world."

claimed, it is true, nevertheless, that in Germany the same effect was produced in other ways. As a result of the large powers conferred on the Bundesrat to enact measures for the regulation of economic **Moratorium.** affairs,¹ on August 6, 1914, the term for bills and checks was extended for thirty days, and later postponed from time to time until May 17, 1915. This was a definite, public moratorium for an important class of obligations. "The civil courts were also empowered to extend the time for payment of any debt contracted before July, 31 1914, for not more than three months, on the application of the debtor, if they thought his circumstances justified the order and if the delay would not inflict undue hardship on the creditor. Further, on the motion of the debtor, the courts could order that the law should not take its course in case of failure to pay rent, mortgages, or interest. Such debts could be extended for three months, and by later legislation the payments on mortgages and debts for land could be extended for six months. The processes by which the courts could grant these extensions were made cheaper and more simple than the usual court proceedings."² In effect, mortgages were practically postponed until the end of the war. Generally speaking, appeals were made to creditors to be as lenient as possible and the collection of debts was not pressed. To say there was no moratorium appears to be clearly inaccurate.

¹ Act of August 4, 1914, *Reichsgesetzblatt*, p. 327. The Acts in furtherance of this purpose are voluminous (*Kriegsnotgesetze*).

² M. Chase Going, *loc. cit.*, pp. 524-525. This writer also quotes as follows from Professor Jastrow (*Archiv für Sozialwissenschaft*, December, 1914, p. 116): "In speaking with business men, one hears that the new ordinances [to secure delay] are of no special effect, because their clients have for some time lost the habit of paying, and because the manufacturers and dealers know perfectly well that it is not to their interest to ruin their customers."

§ 5. The pivotal matter in the German credit situation lies in the interruption to the production and exchange of goods and to the unhindered disposal of securities.

Credit
and the
moratorium. Out of these fundamental disarrangements there come to the surface, as indications, the exceptional demands for credit and the accompanying calls for currency. Inasmuch as the loan bureaus had been organized to take care of loans on securities, and thereby to relieve the Reichsbank to that extent, the brunt of supplying the important credits to the manufacturing and trading establishments necessarily fell on the Reichsbank. The reason why additional credit is called for in such a case is that production and exchange of goods are not functioning normally. In a time of stress credit enables a crippled business man to postpone to the future the realization from his assets. That is, credit, in cases where there is a fairly certain chance of early liquidation, offers all that is legitimate in a moratorium; but, when credit is granted on assets whose liquidation even after the war is problematical, there is no difference in results between such credit and a moratorium granted in war time precisely because assets do not allow of a legitimate loan. The difficulty in granting credit, in case of an upheaval of production and trade, is to discriminate in favor of assets that may be soon realized upon in cash. But it is no solution of the fundamental difficulty to make "cash" abundant out of questionable assets. Sooner or later the losses from such assets will come home to the issuer of the notes. Certainly the quality of the assets accepted by the loan bureaus must be seriously questioned. But even those of the Reichsbank may be made unsound by the course of events in the war.

The Reichsbank was the central resource for credit. On August 4, 1914, measures were passed to widen its

power to lend. It was by law relieved from the obligation to redeem its notes in gold. This suspension of specie payments, of course, carried with it a suspension by the government and by other banks. The imperial treasury notes (*Reichskassenscheine*), the only form of money issued by the government,¹ were on the same date made legal tender, although they were inconvertible. Likewise, the imperial treasury was no longer obliged to redeem the silver, copper, and nickel coins in gold, but, instead, small denominations of imperial treasury notes or Reichsbank notes were paid out in return. Also, the four private banks of issue were permitted to redeem their own notes in those of the Reichsbank. In short, Germany at once slid from a gold to an inconvertible paper basis—with all that such a policy implies.

Power
to lend
extended.

At this time also the 5 per cent tax on the uncovered notes of the Reichsbank in excess of the *Kontingent* was suspended. In this way one of the checks on the extension of the notes was removed. It was not true, however, of the other check requiring a cover for the notes of one-third in cash.² Nevertheless, the constituents of both the cash

One-third
gold cover
not
suspended.

¹ These notes serving as money were the obligations of the imperial government, payable to bearer on demand, redeemable at the Reichsbank in cash, receivable at the public offices for government dues, and formerly issued in denominations of 50, 20, 10, and 5 marks (but those of 50 and 20 have been retired). The Reichsbank has usually held on an average about 25,000,000 marks of them in its reserves. In the first Act, April 30, 1874, 120,000,000 marks were authorized; July 3, 1913, another 120,000,000, and March 22, 1915, a third 120,000,000. This last issue, however, was backed cent per cent by gold or *Darlehnskassenscheine*. Its purpose was to provide small notes. The treasury notes in denominations of 10 marks were withdrawn and those of 5 marks substituted. In effect, there was no increase of the paper money by it.

² Even at the end of the third year of the war, on August 7, 1917, the Reichsbank held of gold, silver, and treasury notes (including *Darlehnskassenscheine*) \$757,000,000 against \$2,226,415,000 notes, thus holding a surplus of \$45,000,000 over the required one-third.

cover and the two-thirds of commercial cover were modified. The loan-bureau notes were accepted for cover on the same basis as imperial treasury notes; and when the former were received in exchange for Reichsbank notes they served as a basis for the issue of three times as many more Reichsbank notes. In addition, the two-thirds commercial paper was widened to include not only imperial bonds with a maturity of three months but also imperial treasury bills.¹

In Germany, as in France, the central bank was called upon to lend directly to the government. In the first two months of war it is estimated that the government

Loans to the
government.

needed \$500,000,000 for the army and navy alone.² For mobilization the Reichsbank was required to supply some \$187,500,000 in the very first days of war. This and other early demands of the Treasury were met by discounting treasury bills. That is, these bills, or unfunded debt, were allowed to become part of the paper covering the two-thirds of the bank-notes. The bank also discounted for the government *Zollkriegswechsel*, or bills drawn in favor of the government to meet customs duties and taxes by persons in districts threatened with invasion who could not pay in cash. Such bills, indorsed by the Treasury, were discounted by the bank. By the end of 1914 the loans of the bank to the government stood at over \$123,000,000.

¹ These are notes of the empire (*Reichsschatzanweisungen*) which run on an average thirty days, and are used as a quick means of obtaining cash by the Treasury. They are deposited with the Reichsbank for safe-keeping, and when the government account runs low the bank buys them, crediting the account with the proceeds. They bear no fixed interest, but are discounted like other bills at the prevailing rate. In the bank-accounts they appear under *Wert-papieren*, separate from ordinary bills (*Wechselbestände*), and amounting to perhaps \$30,000,000 in normal times.

² H. Böttger, *Das Geld im Kriege*, No. 26 in series *Der Deutsche Krieg*, p. 10. Quoted by M. Chase Going, *loc. cit.*, p. 526.

These transactions between the bank and the empire account partly for the very sudden increase in the issues of bank-notes at the outbreak of the war. (See Chart V.)

On the other hand, the government aided the bank to increase its reserves. On August 2 the "war chest" of \$51,000,000¹ was turned over to the Reichsbank; and on August 7, \$2,950,000 of fractional silver and token money were deposited to the credit of the Treasury. To these were added \$8,750,000 of imperial treasury notes; so that the government increased the reserves of the bank by over \$62,000,000. In the run upon the bank, before suspension was announced, the bank had lost by withdrawals of cash \$40,000,000 (of which \$25,000,000 was gold). Thus the government had more than made up to the bank the losses by withdrawals. (See Chart V.)

Government
aid to
reserves.

Apart from the immediate demands of the government, the Reichsbank, as the ultimate source of credit, was called upon for loans to meet the needs of industry and commerce in general which could not be carried by other credit institutions. The disturbance to production and markets made it necessary for well-established houses to borrow on a large scale. The private banks could not meet the emergency. Then, as in every panic, there were those who needed loans to prevent threatening ruin, as well as those who wished to borrow in order to anticipate future contingencies. Furthermore, large advances had to be granted to establishments engaged in filling war orders. So large were these inevitable demands upon the Reichsbank that, with the loans to the empire, the discounts rose from \$200,000,000 on July 23, 1914, to \$1,152,000,000 on August 15, or more than five times. This sudden in-

Pressure
for discounts
at the
Reichsbank.

¹ Cf. p. 202.

crease of discounts actually outstripped the issue of notes before it subsided. It thus appears that the volume of credit needed by the public was fully as large as that required by the government. There is, then, in these demands a full and obvious explanation of the sudden and precipitate rise (as shown in Chart V) in the two related items of discounts and notes in the bank-account. As the pressure for credit converged on the Reichsbank, the movement of items in its accounts were typical of what was going on in the whole fabric of German credit. What happened in August and September, 1914, was only the beginning of an extension of credit (as evidenced by the discounts and notes) which has gone on rising portentously to the end of the third year of the war. There is here presented to the eye (in Chart V) the whole story of swollen credit in Germany. Since borrowers, according to the monetary habits of the country, call for forms of money, the rise of loans is necessarily accompanied by the rise in the volume of notes. In other words, the increase in the circulation goes on without any relation to the need for a medium of exchange in transactions between buyers and sellers of goods.¹ The circulation, on the contrary, is increased in direct ratio to the needs for credit.

The relative inflation of the German circulation in three years of war, as contrasted with that before the war, may be thus briefly expressed (in millions of dollars):

¹ The explanation that money has been hoarded, and that the increase of war goods has been so great as to require a larger volume of money, has been put forward as a reason for the enormous increase of bank-notes. No one can pretend, however, that the exchanges of goods within Germany, whose exports and imports have been practically cut off, and whose civilian production has been greatly reduced, can now need four times the normal volume of money used in prosperous years of peace. Without doubt, the expansion of notes represents a swollen volume of credit, which is made up of promises to pay dependent for their fulfilment on the production of Germany far in the uncertain future.

	1914	1917
Gold outside Reichsbank.....	\$610	\$310
Gold in Reichsbank.....	340	640
Total gold.....	\$950	\$950
Notes of Reichsbank.....	\$500	\$2,213*
Darlehenskassenscheine.....	...	1,265
Total currency.....	\$500	\$3,478
Less circulation for occupied territory... \$250		
Assume gold outside the bank to be hoarded..... 310		
Total offset against notes.....		560
Total circulation.....		\$2,918

* July 31, 1917.

There is thus an expansion in the circulation of about sixfold.

It is to be noted, moreover, that even after the cash reserves reached about \$600,000,000 (see Chart V), the increase of discounts and notes has continued to show a phenomenal rise on a stationary reserve of specie. The increase of loans is the more extraordinary when it is remembered that the Reichsbank has been relieved by the loan bureaus from carrying the burden of advances on securities. In other words, the loans of the Bank do not record all of the expansion of credit to the public. Certain spasmodic enlargements of discounts¹ on the generally rising level are observable (see Chart V) about the time of placing new war credits, when every possible aid was given to borrowers who expected to subscribe. Such times of expansion of credit were shared in very noticeably by the Reichsbank; but although there was a reaction after the

Expansion
when placing
loans.

¹ These were in August and December, 1914; April, October, and December, 1915; April, October, and December, 1916; and March, 1917.

peak of the expansion, the next occasion for expansion always started from a new higher level. By way of comparison with the highest issue of notes in the panic year of 1907 (during which year discounts never exceeded the notes) of about \$460,000,000, the highest point during the first three years of the European War was \$2,213,000,000, July 31, 1917. The rate of discount which had been raised to 6 per cent was reduced to 5 per cent on December 23, 1914.

After September, 1916, it is significant that the discounts rose far above the level of the note-issues. Without an increase of specie reserves and imperial treasury notes (including loan-bureau notes) the requirement of a one-third cash cover evidently prevented the further rise of the bank-notes. But the augmenting discounts must have been satisfied by other forms of payment than notes. The rise of deposits which took place must be due to expanding loans and not necessarily to the carrying of actual money to the bank for deposit. Doubtless, also, the agitation carried on in the financial journals, and by organizations such as the Berlin Chamber of Commerce, to encourage the habit of settling by checks and restricting the use of paper money had some effect. Certain it is that, although deposits fluctuated more or less, they rose from \$236,000,000, July 23, 1914, to \$1,420,000,000, June 30, 1917.

German credits, furthermore, were ingeniously manipulated to increase note-issues in a subsidiary institution in Belgium, known as the Société Générale de Belgique.

Notes in
Belgium.

To the Belgian seller of goods to Germans was given, not money, but a credit on the books of the Reichsbank. With this credit he could obtain payment from the Société Générale in its notes. But the Belgian bank was permitted to use this debt in

Berlin as a basis for issuing three times as many notes. Thus the onus of increasing a part of the issues was laid on even other shoulders than those of the loan bureaus.

§ 6. The emphasis placed on the accumulation of a large stock of gold in the Reichsbank has assumed almost the character of a fetich. The loss of gold during the runs at the outbreak of the war seemed to have shown that it would be impossible to continue convertibility of the notes. That conclusion implied the disappearance of the gold, if it left the possession of the bank. In normal times gold, when paid out, would return. In the present situation, however, there was not only the expectation of hoarding, but of exportation. Cut off from the receipt of gold in payment of export balances, and rather forced to ship some gold in return for needed imports from neutral countries, a firm control over the stock of gold seemed to be the order of the day. In any event, no chances were taken. The estimate placed on the possession of a substantial fund of gold evidently had greater force than the alternative of the disturbances inevitably accompanying an inconvertible and depreciated currency. Doubtless, in this as in other decisions, the German belief in a short war and an early victory became an obsession, which regarded depreciation of the notes as unthinkable, especially with a theory of money whose value was supposed to depend so largely on the will of the state. This was a serious error, a financial Marne, the ensuing results of which will be difficult to measure. Almost immediately the notes depreciated, and by the end of the third year of the war were at a discount in neighboring neutral countries of from 43 to 49 per cent. That statement carries its own lesson.

Desire to
collect gold.

Depreciation.

In Germany, since the private banks carry very small reserves, the stock of gold is to be found either in the Reichsbank or in the hands of the public. Before the war the amount of gold in the country was estimated at from \$950,000,000 to over \$1,100,000,000 of which the Reichsbank then held only about \$340,000,000; so that the gold bore a ratio of over 70 per cent to the note-issues of \$472,000,000. There was thus left in the circulation, or outside the bank, some \$610,000,000, as a possible resource, irrespective of sums held by the allies of Germany. In 1913, the Austro-Hungarian State Bank was reported as holding \$255,000,000 of gold.¹ The gold holdings of Bulgaria and Turkey were, of course, inconsiderable.

Gold
holdings
when war
began.

Systematic efforts were then made to increase the gold funds in the Reichsbank. In addition to the war chest of \$51,000,000 turned over to the bank, as already mentioned, the Bundesrat on November 23, 1914, passed an act penalizing the buying or selling of gold at a rate higher than the face value of the coins; prohibiting the exportation of gold under penalty of a year's imprisonment and a fine of \$1,250; and forbidding publication of the rates of foreign exchange. Without doubt some gold was obtained from Austria and Belgium. The main success, however, in building up the gold stock in the bank was a remarkable campaign conducted among the people to induce the exchange of gold coin, or articles of gold, for Reichsbank notes as a patriotic duty. A canvass from house to house, in shops, in small villages, through the press, schools, soldiers, mutual benefit societies, movies,

Campaign to
collect gold
in the
Reichsbank.

¹ The Imperial Bank of Russia then carried in gold about \$800,000,000; the National Bank of Belgium \$66,000,000; the Bank of France over \$800,000,000, and the Bank of England \$190,000,000. Cf. *supra*, pp. 103, 171 n. 1, 179.

and sellers of beer brought out of hoards or from circulation some \$200,000,000 of gold in the first seven months of the war.¹ Much emphasis is put upon the fact that the exchange was wholly voluntary; but effective official pressure was applied to prevent hoarding and to encourage the deposit of gold. Gold was even smuggled across the borders of Holland on the persons of spies. As a consequence, the gold reserves of the bank steadily increased until the end of 1915, when a final level of attainment seems to have been reached at something over \$600,000,000. In the three years the highest point was gained May 31, 1917, at \$641,500,000. (*cf.* Chart V). From all sources, accordingly, the bank enlarged its stock of gold by about \$300,000,000 through energy and effective organization. If the estimates of the amount in the country at the beginning of the war be accepted, there must still be about \$300,000,000 in hiding. In any event, that the maximum of accumulation of gold has been reached seems to be generally admitted. On the other hand, it is to be noted that, in addition to the stock in the bank, some of the gold withdrawn early in August, 1914, went to Scandinavia, Holland, and Switzerland (estimated at perhaps \$90,000,000), and that other sums had to be sent out in attempts to steady German ex-

¹ In an address to the New York Chamber of Commerce, after his return from Berlin in April, 1917, Ambassador Gerard is reported to have described the hunt for gold in Germany as follows (*New York Times*, July 15, 1917):

"Signs were hung up in the street cars saying, 'He who keeps back a gold piece injures the Fatherland.' Soldiers were given a two days' leave of absence if they would produce a twenty-mark gold piece. For that they were given a twenty-mark note, just as good as the gold in Germany. School children, if they produced a ten-mark gold piece, were given ten marks in paper and a half holiday. In many of the theatres if a person paid for his ticket in gold he would receive a ticket good for another day. I know of one American woman who was visited by two detectives in her apartment in Berlin, who said: 'We hear you have some gold, and if you do not give it to us now, we will search the apartment and break everything in it.'"

change in neutral countries, or to pay for supplies not otherwise purchasable. At all events, at the end of the third year of the war it seems that, while the volume of credit goes on expanding unceasingly, the stock of gold has reached its maximum. Although it had doubled, the percentage of gold to the notes which before the war was over 70 per cent, had fallen to 48.6, November 23, 1914; to 38.9, December 23, 1915; to 30, December 30, 1916; and to 28, June 30, 1917. There could be no more convincing evidence of the increasing strain on the central institution of the German credit system.

Notes increased out of proportion to gold.

Effect of immediate redemption.

Again, we have an illustration of the wide difference produced in the value of the notes by immediate, as contrasted with ultimate, redemption in specie. When the notes are convertible on demand they remain at par with gold. Moreover, redemption on presentation of the notes at once determines the quantity that will remain in circulation. No more will then be retained in the hands of the public than is required for purely monetary purposes as a medium of exchange or for reserves. That is, an inflated condition of the circulation is impossible when there is immediate redemption in gold. But there is far more in the matter than this monetary result. In a country in which, because of monetary habits, the notes are a necessary complement to loans, so that the volume of notes follows the volume of expanding credit, immediate redemption of the notes prevents the expansion of credit beyond the point of soundness. That is, it serves as a test of the solvency of a credit transaction. If a bank expands its loans, so that it issues to borrowers more notes than it can redeem on demand, it must either stop lending or—what in effect is the same thing—accumulate more gold in its reserves;

to secure more gold, the bank must raise the rate of discount, which acts as a brake on additional loans. On the other hand, suspension of specie payments removes these checks on the inflation of credit. The only limit to credit then is the limit to the issue of notes. In Germany the only other check was that the notes should not exceed three times the cash reserves. Consequently, the future solvency of the Reichsbank depends upon the liquidity of the other two-thirds of cover made up of commercial paper. It is inevitable that, in this unprecedented condition of business, many of these assets could not possibly be liquidated, even in depreciated paper, to say nothing of gold.

The science of money and credit has not yet fully worked out the psychological effect of a large fund of gold held in reserve behind notes that are inconvertible. Such gold is in a way a hoard; but, of course, when held by the issuer, it would have a greater influence on public opinion as to the future value of the notes than if this gold had disappeared into private hoards. Even if there is gold in the possession of the public, or obtainable by foreign trade, it is no inexpensive task to mobilize it to be used for redemption sooner or later. Its retention in a conspicuous repository, however, where its amount is known to all the world, gives a positive basis for estimating the future chances of redemption. The extent of the depreciation of the paper, in spite of a hoard of gold behind the inconvertible notes, seems to measure the guess of the community as to the time and certainty of redemption at par. When the note-issues are largely increased it gives good evidence, as viewed by the public, of a postponement of convertibility, and the notes are sure to depreciate relatively to gold. The increasing volume of inconvertible notes does not require us to be

Inconvertibility and depreciation.

lieve that prices have risen because there has been more money placed in circulation, but only that the paper money in which prices are expressed has depreciated because the conditions affecting its value have become less favorable. We see the same processes at work every day in the market for securities, when a non-dividend-paying stock changes in price as the earnings of the property change. In any event, as the volume of Reichsbank notes has risen to unheard-of sums, after the accumulation of gold has come to a standstill, the prospect of redemption has become more remote, and consequently the quotation of the gold price of a paper mark has steadily fallen. The error in Germany, as in France, lies in tying up the borrowing operations of the government with the issue of the notes which form the circulation of the country, and thus invalidating the very standard in which prices and contracts are expressed. The mistake is the fateful confusion between the fiscal and the monetary functions of the state.

§ 7. Since credit involves the obligation to return an equivalent in the future, this unparalleled inflation of credit high and low raises the question as to its probable solvency. Germany has not had from the beginning as much surplus capital as Great Britain or France, but she is thrifty, and her industrial organization is remarkably efficient in making the most of very moderate resources. Just the same, she and the other belligerents are drawing down the reservoir of their accumulated wealth and capital.¹ The dislocation of industry caused by the war has diverted vast quantities of labor, capital, and materials from the normal production of peace goods to the making of naval and mili-

Wealth and capital being reduced.

¹ Cf. Chapter II, § 4.

tary supplies, which, having been destroyed on a scale never equalled in the history of the world, has vanished in thin air. Yet now as always the thing fundamental to a country's staying power, as well as to its credit, is the quantum of tangible present goods on which the population can draw at once. How is it possible for Germany to go on enormously increasing her promises to pay wealth in the future at the same time that her accumulated wealth and capital is being reduced by the frightful expenditures of war?

Credit is a means of throwing burdens forward on the future; it enables the needy to tide over a present shortage in the hope of larger resources hereafter. But for how long a period will credit take care of a shortage? If goods are not forthcoming to replace those destroyed, the surplus is *pro tanto* being wiped out. If so, how can credit obligations be actually liquidated? If met by an increase of paper promises to pay, such a device only postpones, it does not remove, the inevitable day of reckoning based on goods. The Germans did not expect so long a war. What we are witnessing to-day in that country is an experiment in the length of time that credit can carry an isolated community in a condition of want and constant destruction of goods. Her private credit liabilities are already enormously expanded—irrespective of the imperial debt. The whole matter pivots on the quality—that is, on the liquidity by sale and conversion into cash—of the assets which now support the vast structure of demand credits. In normal times the solvency of credit is being constantly tested by recurring liquidation at short periods, so that the entire volume of assets is always in a process of renewal and thus kept healthy and sound. Stop this process of renewal and decay sets in. If these

How can
German
assets be
finally
liquidated?

assets held by German credit institutions are "canned," without the possibility of payment at maturity in short periods of time, they cannot long remain sweet.

In respect of the destruction of wealth and capital, that is going on in all the belligerent nations. It is not confined to the Teutonic Powers. In the working of credit,

War
demands
present
goods.

however, a very different and far-reaching result is produced in Germany from that in the Allied countries, and for a very obvious reason.

Germany is practically cut off from foreign trade (except that with Switzerland, Holland, Denmark, Norway, and Sweden); hence she must rely mainly on the goods which can be produced within her own boundaries. The war can be carried on only by goods strictly in hand, and not in the bush. There must be enough present goods to supply immediate consumption and destruction. If England or France wish, by credit operations with the United States, to replace with American goods those consumed or destroyed on their own firing-line, they can do so. In effect they can fill up by credit the reservoir of goods, as fast as they are drawn down by war, through replenishment of present goods from an outside source. Not so with Germany. When she is compelled to borrow only at home—within the family, so

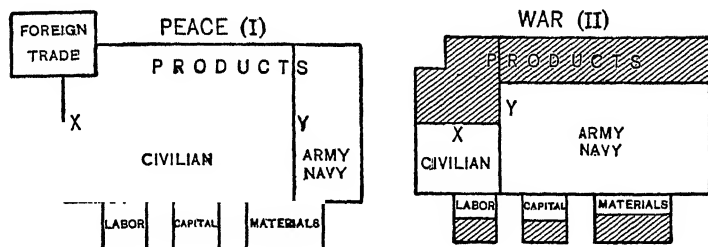
Home
borrowing
does not
increase
present
goods.

to speak—she cannot restore her losses except out of her own internal production. Germany, by credit offered to her own people for goods now destroyed, can give promises to pay from the proceeds of goods produced in

the distant future, but that does not provide her with more goods for consumption to-day. All she can do to meet the wearing-down process is to try to increase her normal, peace-time capacity of production.

The war, however, has very seriously reduced her nor-

mal power of production, as may be illustrated by the following diagrams:



In $X + Y$ (I) are contained the total output in goods from German labor, capital, and materials in times of peace to supply both the civil and military population of about 68,000,000, together with the gains from exchanging some of her products in foreign trade. In the second diagram are seen the first effects of war by the change in direction of productive industry, so that Y , the goods produced for war purposes, shows a disproportionate increase as contrasted with X , the non-military consumption of the civil population. In addition, the block representing the gains of foreign trade disappears. Then, later, come the effects of destruction on the factors of production, which influence the whole output of both X and Y . The shaded parts of the blocks below the area of products show what has happened to these factors—labor, capital, and materials. The withdrawal of men from industry to the front alone reduced the labor force; but as the war has gone on millions have been killed, maimed, or taken prisoners. The intense pressure on industry and the need of labor in producing both X and Y explains the policy of frightfulness in deporting laborers from Belgium, Poland, and Serbia. The waste of capital, as previously

Reduction of
German
production
and
consumption.

explained,¹ has gone on apace. The cessation of foreign trade, except through neighboring neutral countries, has produced a shortage in such necessary materials as cotton, copper, rubber, etc.; the lack of fodder has forced a diminution of cattle, and the scarcity of labor has lessened the output of coal and the efficiency of transportation. Such depletion of the factors of production could have but one result on the total output of products, and as the needs of the army come first, the heaviest burden of reduced consumption must fall upon the civilian population. There seems to be considerable evidence to prove that if the military consumption remains at its present level the productive power of the country will not suffice to provide more than the minimum of existence to the civilian population. The diversion of production to war goods has practically taken away the former surplus above necessities. Indeed, it is a question whether production has not already fallen below the line of necessity for many of certain classes who cannot meet the enhanced costs.

So obvious is the reduction in the production of goods that he who runs can read the inevitable effect upon the basis of credit.² It is impossible that the great mass of assets behind the demand liabilities should be liquid. Yet with steadily lessening production, the volume of demand credit obligations is increasing. If the assets are not now liquid, then the solvency of credit has already gone. Neverthe-

Solvency of
credit
already
doubtful.

¹ Cf. Chapter II, § 4.

² The textile industries, for instance, have been hard hit by the war. Of their own initiative many establishments have already closed. But now, as in the case of other industries, the textile concerns are threatened with compulsory syndication by government authorities, accompanied by the shutting down of unnecessary factories. In the Rhineland and Münster the textile workers show a falling off of nearly 50 per cent as compared with 1915.

less, it may be argued by the authorities that all claims can be, and are, constantly liquidated in bank-notes, and that solvency has been maintained. The coinage of a diminishing stock of goods, however, into an increasing volume of demand liabilities, or bank-notes, undermines the worth of the notes, so that the liquidation is, after all, deceptive. Certainly the depreciation of the paper money reflects this loss of support. So long as appearances are kept up by trading with a depreciated currency, the solvency of credit exists only on paper; economically, so far as a basis of exchangeable goods is concerned, the credit is not solvent even now. An increase of the forms of money and credit by an autocratic government, without a corresponding increase in basic goods, may succeed in tiding hard-pressed borrowers over a temporary emergency during the short period until goods can be again normally produced and sold, or until time is given to permit gradual liquidation without too much sacrifice. But will this hold good for the great cataclysm in which Germany finds herself, now unexpectedly prolonged into the fourth year? Who is able to say what will be the worth of the expanded volume of assets after the war? But any one must know that they are not now liquid. To increase demand forms of credit and money, without a corresponding increase of quick assets convertible into cash, produces what we call an inflation of credit. Inflation of money is the symptom, inflation of credit is the disease.

**Inflation
of credit.**

§ 8. How far the basis for credit operations has been undermined may be learned by the extent of the breakdown, not only in domestic production and trade but in the unprecedented dislocation of Germany's international dealings. The two, of course, are closely interwoven.

As she got more and more away from the old industrial régime to that of new power and machinery, she had been exporting manufactures to pay for one-fifth to one-fourth of her imported materials and food. When cut off from imports by the closing of her seaports, the total volume of her production was lessened. As exports of gold were inhibited, it was difficult to produce enough coal and other goods with which to pay for the reduced stream of imports from Sweden,¹ Holland, and Switzerland. It is to be noted that Germany's largest trade had been with Russia, Great Britain, France, and the United States. To lose all this trade at once was a staggering blow. Credit must shrink accordingly with the emaciation of trade. If there are no markets, there can be no sales, no demand; and assets fade away.

For instance, our exports to Germany, which were \$344,000,000 in 1914, dropped the next year to \$28,800,000; and our imports fell from \$189,900,000 to \$91,300,000.

Now they are *nil*. Before the war England took \$360,000,000 of imports from Germany, and sent her \$442,000,000 of goods.² This interchange, of course, has ceased. German exports in 1912 to British possessions amounted to \$477,000,000; to Africa, Asia, North and South America, and Australasia, \$765,000,000. Take away this vast trade, and we may understand the volcanic effect thereby caused in business engagements and credit. It is estimated that of all German trade 70 per cent was sea-borne, of which 40 to 50 per cent was with countries now hostile to her. Most of

Subtraction
of German
foreign trade.

Basis of
credit
removed.

¹ Since the early closing of the ports of Hamburg and Bremen, Lübeck and Stettin have exported and imported largely by the Baltic from Scandinavia. These ports became the busiest cities in Germany. Through them chemicals long went to the United States.

² Cf. *supra*, p. 77.

her ships are idle. The imports of Russian flax, hemp, and raw materials, and exports to Russia of her manufactured goods, stopped. The foreign markets for her subsidized beet-sugar were largely closed, except through Sweden, Denmark, Holland, and Switzerland; and the same was true of her dyestuffs,¹ drugs, chemicals, potash, and coal. The production of copper at home was about 50,000 tons against a normal consumption of 250,000 tons, the difference coming chiefly from the United States. To a great extent she was cut off from copper, nickel, petrol, wool, cotton, rubber, and jute. The silk, steel, woollen, and jute industries inevitably fell off in production. In that way the basis of much credit was removed. The general stock of other than war goods being lessened, there was less to be consumed. As the labor, capital, and materials were shortened, so must the volume of goods have declined. On the other hand, there were large profits in war industries, such as those turning out machinery, foundry work, leather, fats and oils, clothing, textiles, and foodstuffs. But not only was there in general a material subtraction of basic goods on which credit rested, but the inability to meet their engagements has inevitably injured the estimate of German credit in the markets of the world.

§ 9. A phenomenon common to both belligerent and neutral countries during this war has been a rise of prices. At once the causal connection between money and credit, on the one hand, and the level of prices, on the other, is suggested. Certainly the documents of each country will

¹ The color-plants and the potash-mines were turning out not over 20 per cent of their normal product late in 1914, largely because of a shortage of labor and coal. The Newcastle coal had been, of course, cut off, and the Westphalian coal was less desirable.

furnish much material taken from the years of war to test the theories of price. However that may be, it is entirely clear that for Germany at least we have no very useful data as yet for a final discussion on this pivotal problem of credit and prices. There is not much more than hearsay evidence. We know, of course, that German prices have risen; unofficially, prices in general are said to have risen 75 or 100 per cent in the early part of 1916. In the autumn of 1914, according to the German press,¹ copper had risen 76 per cent; aluminum, 212; antimony, 366; nickel, 85. Potatoes, wheat, meat, fats, and all foodstuffs have admittedly risen to high levels. The same is true of horses bought in Scandinavia and Denmark at double former prices. Unimpeachable evidence comes in of a merciless increase in the cost of living, which has laid a heavy burden on the poorer classes, causing suffering, a demand for higher wages, and serious discontent and occasional rioting.² Cotton, rubber, wool, and jute, together with petrol, nitrates, and materials for war goods, have, of course, risen markedly.

Nevertheless, Germany offers no field for a normal study of prices, and for an obvious reason. The very first upward movements of prices were the signals for a drastic regulation of maximum prices by a paternalistic and autocratic government. There was, and still is, an elabo-

¹ *Frankfurter Zeitung*, November 12, 1914.

² "Investigations conducted by *Vorwärts* in September, 1915, showed that the price of food had increased 85 per cent in Berlin since the beginning of the war. The prices of 52 common articles of food were taken from the price-lists of the large co-operative stores and the aggregate cost of one pound of each article was found to have been 35 marks in August, 1914, but to have increased to 65 marks in August, 1915. The official index number for food prices in Berlin also shows an increase of 82 per cent between July, 1914, and December, 1915." M. Chase Going, *loc. cit.*, p. 545. Also, the ration provided for a German marine per week, which had been 25 m., 12 pfg., in July, 1914, was 39 m., 13 pfg., in August, 1915, showing an increase of 56 per cent.

rate system for controlling the prices of all necessary articles of food. The extent to which this interference with price-fixing has gone on has probably never before been equalled. Moreover, as time has passed, ordinary property rights have disappeared before the necessities of war, until military exigencies have come to create a conception of a national communism in which the state may requisition whatever it needs, even if all the economic surplus should be taken. Additional taxation being little used, goods are obtained, if not by loans, bordering on forced subscriptions from municipalities and others, then by commandeering. Prices, under such conditions, have little meaning to the economist.

Government regulation of prices vitiates usual inferences.

And yet the man-who-knows-everything-absolutely is willing to say that the admitted rise of prices is due to inflation. It is not the place to discuss here the theory that prices must rise with an inflation of the currency; or, if prices have risen—assuming the rightness of the theory—that there must have been an inflation of the currency. There is only space to say here that no substantial body of facts has ever been collected which prove this theory; while so many other factors, which affect prices even more than the quantity of money possibly could, are entirely overlooked.¹ The facts as to the increase of money and credit in Germany have already been given and discussed.² The additional paper circulation put out—as a symbol of expanded credit—since the war began has been about \$2,800,000,000 (bank-notes, loan-bureau notes, and imperial treasury notes). Not more than about \$300,000,000 of the stock of gold known to be in the

Inflation not a sufficient cause.

¹ Cf. the author's *Principles of Money* (1903). Cf. *supra*, pp. 66-68, 116-118, 182.

² Cf. *supra*, § 5.

country before the war is supposed to be still hoarded. Certainly, some \$2,500,000,000 may be regarded as a fair approximation to the addition made to the money of Germany since July, 1914.

The inflation of German money and credit is unmistakable; but it is not necessary to assume it as the cause of the admitted rise of prices. That the paper mark has

Depreciation of notes one cause. depreciated wherever a direct comparison is made between it and gold in neutral markets, such as Amsterdam and Copenhagen, there is

no doubt whatever. The suspension of gold redemption and the unrestricted increase in the circulation are sufficient reasons for the depreciation, as already presented.¹ If there is a depreciation of the money, of course, prices registered in it will rise accordingly. Were everything else, for example, to remain the same, and a country were suddenly by law to drop from a gold to a silver standard at one-half the market value of gold, prices would inevitably be doubled. In short, whatever the cause of the depreciation of the common money of account, the paper mark, the general level of prices must be affected by it, were no other causes at work.

But there were other causes at work on prices. It is one-sided to discuss changes of price by considering only the money or credit by which goods are exchanged.

Obviously, the expenses of producing goods affect their prices. Higher wages have been always regarded as a reason for raising prices; and the same is true of a serious increase in

Other more important causes of high prices. the costs of materials, and a rise in freight transportation for materials as well as for finished goods. All these causes were actively at work in Germany. Moreover, many necessary materials, like wool, cotton, and

¹ See §§ 6, 7.

copper, had a scarcity value. The high prices of German textiles are fully accounted for by the scarcity prices of raw cotton and wool and the increased price of labor. In addition, a sudden and imperative war demand for petrol, cloth, nitrate, steel, and similar products needed for munitions must have had an inevitable effect on their prices. Therefore, while it is unnecessary to claim that the ease with which credit was obtained in Germany had no influence on the prices of goods which the borrower wished to purchase, it is evident that it was only one, and not the most important one, of the factors working together to raise prices. If price is a ratio of exchange between goods and some standard money, then it is as important to consider the forces working on the goods side of the ratio (such as wages and materials) as it is those on the money side (such as the quantity in circulation, its redemption, etc.).

§ 10. Between countries bills of exchange perform the same essential service as that of checks between persons in domestic trade. On the shipment of goods the bill is drawn as a claim on the buyer in the land to which the goods are moving, and when accepted it becomes the best of short-term commercial paper discounted by international banks. Like other forms of legitimate credit, it springs from and is based on the movement of goods or securities. When international trade ceases, as is largely the case with Germany, the basis of this credit disappears. The foreign exchange problem of Germany, therefore, was not only made very important, but it is interesting by its contrast to that of England.¹

The rise in the number of marks which had to be paid in Germany for claims on money in other countries, or,

¹ Cf. Chapter III, § 9.

vice versa, the decline in the amount of money of other countries which would buy a claim on marks in Germany

Fall in
German
exchange in
July, 1914.

—is what is meant by the fall in German exchange. From the middle of July, 1914, in Berlin, the price of exchange was against Germany, that is, more marks were required to

buy bills on foreign centres. This is another way of saying that there was a strong demand in Berlin for claims to money elsewhere, indicating a tendency to send funds abroad. As an exception, however, claims on St. Petersburg and Vienna were abundant. Russian exchange fell in Berlin to 204 (par being 216) and Austrian to 82 (par being 85), showing that funds were moving from St. Petersburg and Vienna to Berlin. The opposite was true respecting Paris and London; English and French capitalists were withdrawing their balances from Germany, Austria, and Russia through Berlin. Hence, since

Funds
moving from
Vienna and
St. Petersburg
to Berlin,
thence to
Paris and
London.

there was a strong demand in Berlin for claims on London and Paris, the price of bills of exchange on those cities rose; that is, German exchange fell. The rate on London rose early to 20.57 (par 20.43 marks for £1), and by November, 1914, to 22.20, disclosing a fall of

over 8 per cent below par.¹ On and after November 12, 1914, quotations of exchange were not allowed to be pub-

¹ November 5 and 11, 1914, the *Frankfurter Zeitung* gave the following quotations of exchange:

	November 5	November 11	Par
Checks on Holland.....	186.25	187.25	170
English sovereigns.....	21.70	22.20	20.43
Russian notes.....	207.50	204.50	216
United States greenbacks.....	4.40	.....	4.2
	(i.e., \$1.048)		
Swiss francs.....	.....	88.70	80

lished. It will be remembered that, at the very beginning of the war, when money was hoarded, the banks presented bills at the Reichsbank for discount to get notes with which to meet cash demands at their own counters; so that note-holders presented notes at the Reichsbank for gold. After some losses of gold, the Bank, as has been explained, suspended specie payments. Obviously, foreign correspondents wanted gold exchange. The price to which exchange on London rose showed a large profit on the shipment of gold; but the export of gold was forbidden. In other words, the "shipping-point" disappeared, and the means of restricting the price of exchange between limits based on the expense of shipping gold out of and into Germany ceased to exist. In September, when the Reichsbank notes had been sent by neutrals in payments to London at a discount of 20 per cent, they were refused.¹

Disappearance of shipping-points.

In exchange operations with other countries German bills were at a discount. In respect of Switzerland, Germany had been the best customer for her special products, such as fresh and condensed milk, cheese, chocolate, and fruit, and sent her the sugar, coal, and minerals she lacked. The war greatly reduced this trade, and caused a drop in exchange. In November, 1914, 100 German marks could be bought in Berne for 111 Swiss francs (par being 123.5). Later on, as German coal came with difficulty to market because of poor transportation and scarcity of labor, Germany was unable to pay in goods for all the foodstuffs surreptitiously entering Germany through

Fall of German exchange in Switzerland.

¹ In August, 1914, for foodstuffs bought in Scandinavia and Holland, Germans paid by drafts on supposedly German funds in London. When these drafts were sent to London banks for collection payment was refused. Cf. London *Economist*, August 29, 1914, p. 387.

Switzerland. Consequently, as gold shipments were negligible, claims to money in Germany continued to fall in price in Switzerland. In November, 1916, Germany is reported to have sent \$2,500,000 in gold to the Swiss National Bank to support the price of exchange. Evidently the causes of the decline in German exchange were too deep to be reached by such inadequate shipments of gold; for bills on Germany were then quoted at 84.60, showing a depreciation of 31 per cent. The sending of a supply of coal to Switzerland was later made contingent on a loan to Germany; but there is no evidence that the establishment of such credits has successfully restored German exchange to normal conditions; for quotations went to 67.50 (July 5, 1917), showing a discount of 45.3 per cent.

The exchange markets in Scandinavia and Holland were similarly affected. The large trade with Holland and Sweden, and the unwillingness of Germany to send gold had the usual result. All the facts are not yet known. We do know, however, that the exports of dyestuffs was kept up as long as possible, mainly through Sweden; but, at the end of the third year of the war, July 5, 1917, exchange on Stockholm showed a depreciation of 47.1 per cent (par being 112.5); and on Copenhagen of 44.6 per cent. In the beginning of 1915 extensive sales of Russian and American securities were made through Holland. Also, coal and minerals were sent to her from Germany. Moreover, as early as November, 1914, and since, more or less gold has been sent to Holland. To that extent the sale of German bills has been economized; but the gold shipments, while producing some temporary effects on exchange, have been inadequate. On July 5, 1917, these bills bore a discount in Amsterdam of 43.2 per cent.

Exchange on
Sweden and
Holland.

In South America, where Germans had owned street railway lines, water-works, and lighting or power companies before the war, more or less liquidation has since been going on. To pay Germans for these credits, the South American banks have transferred funds to Berlin. If they drew on balances in New York they thus aided the American market for bills on Germany, by offsetting sums due from Germans. In all possible ways of this sort, Germany was trying to pay for such imports as could find their way directly or indirectly into her territory.

During the time when the United States was neutral, American goods went to Germany through neutral European ports in considerable quantities. Cotton was sent even through Switzerland. That is, Germans owed us; but as very few exports came to us from them, as time went on, a balance was due us on the merchandise account. The obvious resort of borrowing here and establishing German credits was had, but no large German loans¹ were placed in the United States. Dyestuffs and securities of American railways and industrials sent here helped the quotations of the mark; but in spite of all devices they declined. In Berlin the dollar rose as high as 6.30 (par being about 4.2 marks). In New York, exchange is quoted on the price in dollars of 4 marks, par being 95.25 cents; but it has declined even to 66.25 cents, showing a depreciation of over 30 per cent. Bills being a claim to marks in Germany, and as paper marks were inconvertible into

German
exchange on
New York
during our
neutrality.

¹ Imperial German war bonds were offered and sold here at prices fluctuating with the quotations for exchange. In such transactions the rate of exchange was used as a measure of the depreciation of the mark, and the price of bonds changed accordingly. Imperial 5 per cent loans were offered in New York in December, 1915, at the price of \$202.50 per 1,000 marks, showing a depreciation of 25 per cent.

gold, the exchange not supported by something akin to redemption could fluctuate, like the paper, for various reasons; as a consequence, there arose speculation in German exchange, just as in anything else whose price fluctuates. All dealings in German exchange, of course, ceased when the United States declared war against Germany in April, 1917.¹ For some time previously the bankers in New York and Berlin had been reducing their balances in the respective centres.

The German explanation of the fall in exchange seems to be that it is solely a matter of exports and imports of goods and securities; that, being unable to export, they are not in a position to keep up the rate of exchange; that payments for carrying commerce and the expenditure of travellers in Germany have ceased; that, because of the moratoriums in other countries, German bankers are prevented from drawing on foreign balances; that German funds loaned to foreigners are not collectible; that the Reichsbank cannot part with its gold; and that the unfavorable rate of exchange is no index of economic or financial conditions at home.² The rate, however, is a matter not subject to governmental control. In Germany, as in England, it has been proposed to go to the root of the matter by lim-

German
explanation
of the fall in
exchange.

¹ Business in German and Austrian exchange at New York was in fact suspended after March 28, 1917, when the final quotation on Berlin was 69.50.

² Doctor Helfferich in the Reichstag, March 10, 1915, is reported to have said: "Foreigners think that it" [the fall in exchange] "means a depreciation of the Reichsmark. We cannot deny that we have to pay more for the Swiss franc, the Dutch guilder, the Scandinavian crown, and the American dollar than in normal times. The rise of the foreign rate of exchange, in my opinion, is in no way connected with the internal strength of our financial position. It depends simply upon certain technical points of our foreign trade. In normal times Germany can pay for her imports by her exports and the interest on her capital invested abroad. It is now impossible to collect the greater part of this interest, especially on the large investments in London. We are importing raw materials and food which in normal times are paid for in cash or

iting imports to indispensable articles and by stimulating the exports of goods not needed (as potash, for example). In Germany's position there is not much in such a suggestion, because it is not hers to decide in the main what she shall export or import.

The experience of Germany with foreign exchange differs, as has been said, from that of England. In the case of the former gold payments were abandoned from the beginning, and attempts to stabilize the unit of international payments were useless without considerable shipments of gold. The notable problem of the German rate of exchange is its relation to the depreciation of the bank-notes, that is, to the standard of prices. Without immediate redemption it was inevitable that the notes should depreciate. But what is the measure of the depreciation? Is it correct to assume that the rate of exchange is a fair indication of the depreciation of the notes?¹ In any event, one point is obvious. A buyer of German exchange in Amsterdam, for instance, pays Dutch gold for a claim to paper marks in Berlin. The purchased bill is a means of paying a debt in Berlin; but how much should he give for the bill? If he were to bring the marks to Holland what would they be worth? In the open market they

Effect of
depreciation
of the notes
on exchange.

short-time bills, while the greater part of the exports are manufactured goods sold on long-time book credit. The machine industry has large sums owing it in Russia. Exports have, moreover, suffered more than imports, and the exports are concentrated in a few neutral countries. It would be easier if gold could be exported. But we are of the opinion that the keeping of a gold reserve is at present more important than the maintenance of the German mark abroad." Cf. M. Chase Going, *loc. cit.*, p. 545.

¹It is interesting to compare the German situation with that during the restriction period in England, 1797-1821, so much stressed by the *Bullion Report*, and by Ricardo. In the theory of that day it was assumed as a matter of course that the depreciation of the notes was measured by the rate of foreign exchange, or by the quantity of notes needed to buy the gold coins of another country. Cf. Laughlin, *Principles of Money*, chap. VII, §§ 3, 4, and p. 254.

were at a heavy discount. That is, the bill would be worth no more than the value of the money in which they were payable. If the notes have depreciated, bills payable in notes will depreciate accordingly. In short, bills are affected by convertibility in the same way as paper money. If convertible on demand into gold (*i. e.*, if shipping-points exist and gold moves freely), bills will remain about par; if not payable in gold, they will sell at a price which expresses the number of depreciated notes needed to obtain par in gold.

The pivotal matter in this case is the disappearance of the shipping-points, or the suspension of gold payments in respect of foreign exchange. The fluctuations of the bills can no longer be held within the prescribed limits determined by the expense of moving gold to and fro. It is exactly like the failure of the brakes on a car when going down a steep decline. Here, then, is the one important difference between the policy of Germany and that of England; and the contrast is full of significance, not only to an understanding of the exchanges, but also to the proper means of conducting the operations of credit in a great war.

Difference
between
German and
English
policy.

It is not to be supposed, however, that no other forces than the condition of the currency act upon the price of bills. The analysis of these forces was given in the study of English exchange.¹ Of the five forces there enumerated, the shipment of gold (4) drops out for Germany, and the depreciation of the currency (5) enters; but the other forces—the movement of goods and securities (1), the payments for interest, freights, etc. (2), and the creation of foreign credits (3)—remain in operation, but only in a much re-

Forces
affecting
German
exchange.

¹ *Supra*, p. 125.

duced state. Yet these forces, common to both the German and English experiences, produce widely different practical results, accordingly as they are restricted or not by the movement of gold. Of course Germany cannot export freely; but whether she does or not, the one thing which would limit the fall of exchange to a formal shipping-point is absent, the shipment of gold. To this absence must be attributed the sensational fall in German exchange, and not to the disproportion between exports and imports of goods. Even the sending of securities, or the creation of credits abroad, is able to produce little effect on the downward course of exchange, when the brakes are not working. It is not merely a technical question.

It is to be noted, of course, that Germany trades only with the few adjoining neutrals, and not with her enemies. If it be supposed that the rates of exchange are determined primarily by the balance between the exports and imports of goods and securities, then the price of exchange in any one neutral country would be essentially a question of the balance of trade between Germany and that country alone. Yet we know that this is not the fact. There is much the same depreciation in all the neutral centres. The rate on German bills in Holland, for instance, depends on more things than the balance of trade between the two countries. The controlling force is evidently the value of the money in which the bill is payable. The balance of trade may cause fluctuations between the shipping-points. When they disappear the balance of trade alone is not the controlling force.

§ 11. In financing the war, Germany furnishes a characteristic experiment of taxing little but of borrowing

much. Her credit operations in placing loans on a very large scale, therefore, have especial interest. This choice, to be sure, in favor of loans as against taxation, may not have been entirely voluntary. Additional taxes on top of already high levies may not have been politic; but undoubtedly it was long expected that a victorious army would enable her to impose indemnities on her defeated enemies heavy enough to more than cover the expenditures of war. Whatever the reason, the necessary outlay of an unexpectedly long and expensive war was too large to be met by any possible taxation. Borrowing of unprecedented sums was inevitable. How they were raised by a country more or less isolated and how the burden can be carried are pertinent questions.

The public debt of the German Empire in 1913 was \$1,194,000,000, with an interest charge of \$58,000,000; in addition to which must be considered that of the German states, amounting to \$3,854,000,000, with interest charges of \$170,000,000. There were municipal debts also. The outgo in the annual budget of the empire was in round numbers \$880,000,000. It is to be seen that, while the imperial debt was small compared with that of other countries, France in particular, the debt of the German states alone was larger than that of the United Kingdom.

During the first year of the war there was no additional taxation. In the beginning the first needs of the government were met by the presentation of imperial treasury notes to the Reichsbank for discount; but as early as August 4, 1914, as if carefully prepared beforehand, a large war credit was voted. In the First Loan, which followed the credit and was placed in September, 1914, treasury notes to the amount of \$250,000,000 were authorized due October 1, 1920, bearing 5

German
public debt
before the
war.

First Loan.

per cent interest, and also an unlimited amount of imperial 5 per cent bonds not convertible within ten years. At 97½ subscriptions were made to the total of \$1,115,000,000. It is claimed that this sum was raised entirely at home, no foreign subscriptions having been received. Of the receipts, President Havenstein stated that less than one-fifth were in the notes of the loan bureaus. Although the savings-banks were not obliged to subscribe, some \$225,000,000 were taken by them. Bonds were issued in denominations as low as \$25, and depositors were urged to invest in the loan as a patriotic duty. The Krupps are reported to have taken \$7,500,000.

Expenses seem then to have been running about \$350,000,000 per month; so that the prolongation of the war, rendered inevitable by the battle of the Marne, soon demanded another loan. This was put out in March, 1915, in the form of unlimited treasury notes due October 1, 1922, and 5 per cent imperial bonds, as before, both at a price of 98½. Instalments could be paid within four months until August 20. This offering yielded \$2,265,000,000, the savings-banks taking about \$495,000,000. It is said that foreign subscriptions amounted to perhaps \$30,000,000. Second Loan.

The Third Loan, solely of 5 per cent imperial bonds, in September, 1915, yielded \$3,025,000,000, at a price of 99, when the military situation looked favorable. Third Loan.

In the Fourth Loan, after the second winter of war, offered in March, 1916, a change was introduced in the way of 4½ per cent treasury notes, at 95, due July 1, 1932; but also the same imperial bonds as in former loans were sold at 98½. Although the number of subscribers was larger than in any previous loan, the amount subscribed, \$2,678,000,000, fell below Fourth Loan.

the last loan. There were 2,406,118 subscribers for sums less than \$50.

The Fifth Loan, coming as usual in the autumn, consisted of $4\frac{1}{2}$ per cent treasury notes, maturing from 1923 to 1932, at 95, and the familiar imperial 5 per cent bonds

at 98; but, while the amount subscribed was
Fifth Loan. \$2,675,000,000, the number of subscribers fell off more than a million, showing that the loan had been raised by the richer persons and institutions.

The Sixth Loan offered as before (1) the 5 per cent imperial bonds, not redeemable before 1924, at 98. But there was also (2) an offer of new treasury bonds, bearing

interest at $4\frac{1}{2}$ per cent, at 98 (instead of 95
Sixth Loan. as in the Fifth Loan). To justify the price two striking features were introduced. Beginning in January, 1918, by drawings, groups of bonds drawn would be paid off at 110; after July 1, 1927, holders of bonds not yet selected could convert them into a 4 per cent bond, but, if chosen at a second drawing, would be paid off at 115. By 1937 those not yet taken could be converted into $3\frac{1}{2}$ per cents, with a chance, if drawn, of repayment at 120. In 1967 any bonds yet out would be redeemed by the government either at 110, 115, or 120, according to their fate in earlier drawings. By a second feature, subscribers were allowed to convert at a premium¹ old treasury bonds and old war loans into the new treasury bonds to double the amount of their subscriptions, if cash were paid in. It will be interesting to note that only

¹ The government gave a cash premium of $1\frac{1}{2}$ per cent for 5 per cent bonds of the First Loan, and for those of the Second $\frac{1}{2}$ per cent. Or, the 5 per cents of other loans could be converted at par without payment by either side. But the holder of $4\frac{1}{2}$ per cent treasury bonds of the Fourth and Fifth Loans must himself pay 3 per cent if converted. If drawn in 1922 and paid off at 110, the rate of interest would be $6\frac{1}{2}$ per cent. The lowest denominations were \$250.

about one-tenth of the whole subscriptions were for the new $4\frac{1}{2}$ per cents. For both forms of the Sixth Loan the lists were opened March 15, and closed April 16, 1917; while the payments by instalments ran to the middle of July.

One significant admission of bankruptcy in this loan should be given full notice. Out of the nominal value of the original $4\frac{1}{2}$ per cent bonds subscribed for, the government specified that 5 per cent should be devoted to the expense of the drawings and the payment of interest. Paying interest out of the principal is not usually regarded as an evidence of solvency.

Early in 1915 about \$10,000,000 of imperial treasury notes were disposed of in the United States. When they matured in January, 1916, they were paid off. In April of that year a similar issue was offered, but only \$1,000,000 were paid off when they fell due in April, 1917, the remainder being continued at 6 per cent (the interest being paid in advance). Many of these notes remained in the hands of our banks undisposed of, until the banks, on fear of war with the United States, insisted on payment. This seems to have been the only external loan made by Germany. Of the second imperial loan floated in Germany it is reported that perhaps \$30,000,000, as already said, were taken abroad. All told, it is believed that some \$25,000,000 of German bonds were bought in the United States, and perhaps an equal amount in neutral countries.

The funded debt, of course, lags far behind actual expenditure. After the Sixth Loan the imperial funded debt was about \$15,000,000,000, but additional expenditure had been incurred to the end of July, 1917.¹ The total credits voted by February, 1917, had been about \$20,000,-

¹ From February, 1917, the monthly expenditure had been \$750,000,000.

THE VARIOUS LOANS MAY BE SUMMARIZED AS FOLLOWS:

	Date	Number of subscribers to loan	Character of loan	Price at which offered	Rate of interest	Amount subscribed (in millions)	
First Loan.....	September, 1914	1,177,235	\$250,000,000 Treasury Notes, due October 1, 1920. Imperial Loan, not redeemable before October 1, 1924.	97½	5	\$250	\$1,115
Second Loan.....	March, 1915	2,694,063	Unlimited Treasury Notes, October 1, 1922. Imperial Loan, October 1, 1924.	97½	5	865	
Third Loan.....	September, 1915	3,966,418	Unlimited Treasury Notes, October 1, 1924.	98½	5	194	2,265
Fourth Loan.....	March, 1916	5,279,645	Unlimited 4½% Treasury Notes, July 1, 1932. Imperial Loan, October 1, 1924.	98½	5	2,071	
Fifth Loan.....	September, 1916	3,809,976	Unlimited 4½% Treasury Notes, 1923-1932. Imperial Loan, October 1, 1924.	95	4½	3,025	2,678
Sixth Loan ¹	March, 1917	7,063,347	Unlimited 4½% Treasury Notes, 1918-1967. Imperial Loan, October 1, 1924.	98	5	393	
				98	5	2,985	2,675
				98	5	268	
				98	5	2,407	3,280
				98	5	340	
				98	5	2,940	\$15,038
				98	5		

¹ The Seventh War Loan, September, 1917, is offered in two forms, on the same terms as in the Sixth Loan. The lists closed October 18, when the total subscriptions are reported to have been \$3,108,000,000.

000,000, but at that date Count von Rödern estimated the war expenditure at \$25,000,000,000.¹ To the funded debt there should be added for various expenditures in order to arrive at the total imperial war debt by the end of the third year of the war, at least \$5,000,000,000. Therefore, in trying to ascertain the total burden of imperial indebtedness for three years, the following may be set down as the approximate result (in millions):

Funded debt, including Sixth Loan.....	\$15,000
Additional expenditure to August, 1917.....	5,000
Floating debt, treasury bills, ² etc.....	2,000
Pre-war debt.....	1,200
	<hr/>
	\$23,200

To find the full weight of debt to be carried by the German people, there should be added the debts of the various states and municipalities. Before the war the states had a debt of \$3,854,000,000, which must have been seriously increased during the war. They have since borrowed largely from the loan bureaus. The municipalities also are deeply involved. For instance, eight Saxon cities had incurred a war debt of over \$64,000,000 by the

Total burden
of German
debt at end
of three
years.

¹ The imperial war credits voted have been as follows (in millions):

August 1, 1914.....	\$1,250	June 7, 1916.....	\$3,000
December 2, 1914.....	1,250	October 27, 1916.....	3,000
March 20, 1915.....	2,500	February 24, 1917.....	3,750
August 20, 1915.....	2,500	July, 1917.....	3,750
December 21, 1915.....	2,500		
		Total.....	<hr/>
			\$23,500

Since Count von Rödern, minister of finance, is reported to have said in February, 1917, that the war expenditure of Germany to that date had been \$25,000,000,000, the estimate in the text of \$23,200,000,000 as the total debt at the end of three years must be overconservative.

² This figure for treasury bills is perhaps too conservative. The London *Economist* (September 22, 1917, p. 423) estimates the total amount of treasury bills outstanding to be over \$5,500,000,000. If so, they may be partly included in the estimate of additional expenditure to August, 1917.

end of 1916; while one town of 30,000 people near the Rhine had alone borrowed \$625,000. The obligations for pensions, relief to families, etc., must be heavy. It would be a very conservative estimate to add to the imperial debt as stated above \$7,000,000,000 of other debt. Therefore, had the war ended in August, 1917, the German people as a body would have faced a burden of at least \$30,000,000,000 of debt, the interest charge on which at 5 per cent would be \$1,500,000,000 a year, independent of normal budgetary demands, which before the war were \$880,000,000.

It is to be remembered that the loan bureaus (*Darlehnskassen*) had as one of their chief objects to aid in placing loans to the government. They were intended to relieve the Reichsbank from requests for loans on securities (a part of the Lombard business). The source of danger to credit from the new bureaus was the possibility of creating demand liabilities in their note-issues (*Darlehnskassenscheine*) against unliquid assets. Since the stock exchange was closed, securities were unsalable, and yet it was precisely this class of obligations which the loan bureaus were expected to accept as a basis for loans. Had the war been a short one, with a quick rebound of peace and prosperity, income and earning power might have given these securities a fresh life and value; and the assets behind the notes of the loan bureaus might have become quick, and furnished the means of liquidation through ready sale at home or abroad. As the war, however, has lengthened out, and as the debts of the empire, the states, and the municipalities (whose securities are some of those on which loans were made) have increased beyond all expectations, the liquidity of these assets, as well as the securities of many industrial concerns (except

Notes of
loan bureaus
based on this
expanded
debt.

war companies), has become less and less certain. It is not so much the quantity of these note-issues as the soundness of the assets behind them which determines their vulnerability.¹ There is dangerous inflation, if demand liabilities are built up in undue proportions to the body of salable and quick assets behind them. The question is therefore raised whether the loan bureaus have aided in inflation when coining unsalable securities, or even salable ones, into a form of money which made it accessible to any one wishing to subscribe to a war loan. In reply it is stated that only 17.4 per cent of the subscriptions to the First Loan were paid for with notes of the loan bureaus; 5.7 per cent of the Second Loan; 6.4 per cent of the Third Loan; and about 6 per cent of the others. However this may be, we know that these bureaus have issued over \$1,200,000,000 notes, and that the assets behind them are securities unsupported by any cash reserves. Are these assets capable of protecting demand notes² circulating in the hands of the public?

When we face the fact that the German people have incurred a war debt in three years which is more than one-third of the whole wealth of the country (as estimated by Helfferich before the war), there is reason to examine the legitimate basis behind the credit of the state, and the methods used to place the loans. Of course, the amount of money in circulation, the ease in getting it by loans, is only a super-

Solvency of
this credit.

¹ One apologist (M. J. Bonn, *German War Finance*, pp. 11, 12) speaks of these banks as conservative in lending "on perfectly good securities *which they could not sell*, as the stock exchange was closed, and which, in any case, they could have *sold only at a loss*." It would be difficult to frame a better definition than in these words for unsound assets, especially for banks issuing notes payable on demand to the amount of \$1,200,000,000, without any cash reserves.

² The notes, it should be said, are secured by the unlimited personal liability of the borrower, by the value of the pledged collateral, and by the guarantee of the government.

ficial part of the whole matter. The bookkeeping of the case may not be more than a means of putting a good face on the situation. The fundamental elements must always be the production and sale of goods, by which all credit and all final liquidation of obligations, public or private, must be sooner or later met. It is perfectly clear that the present production and exchange of goods (apart from war supplies) has undergone drastic reduction, while the credit obligations supposed to rest on this production have increased enormously. These credit operations are increasing on a declining value of assets. It is impossible that there could be present liquidation if it were demanded; hence there can be no present solvency. It is no proof of solvency to increase the number of monetary claims against a declining volume of assets, and so enable transactions to be settled in "cash." The only thing accomplished is to keep up appearances to-day by going through the forms of solvency, and thereby

Pyramiding
of credit
at loan
bureaus.

postpone to the future by credit the final tests of liquidation. At present the devices for keeping up appearances in placing loans are not impenetrable. The loan bureaus undoubtedly admit the pyramiding of credits upon obligations which may be unsubstantial.¹ The process can go on indefinitely, so long as the unlimited power of the government can prevent the usual tests of solvency known

¹ Internal evidence as to the methods of floating the huge German loans is provided in an extract from the *Kölnische Zeitung* of September 2, 1915 (quoted in *New York Nation*, March 8, 1917, p. 285):

"It is not necessary that one should have actual gold or silver, and any one possessing *anything* can participate whether he has ready cash or not. . . . If you hold securities . . . it is not necessary to sell them; you simply borrow money against them at any *Reichsbank-Darlehnskasse*, or at any large bank, and as you will receive almost as much interest on the war-loan stock, or even more interest than you pay to the lending bank, you will be nothing out of pocket. . . . If you have already subscribed to the First or Second War Loan, and paid in full for the same, you can at once participate in the present issue. All you

to the outside world. Thus the isolation of Germany, and the floating of loans entirely among a people subject to absolutism—to whom it is within the power of the government to indicate what shall be the tests of liquidation, even to taking away existing control over property, if military necessity requires it—permit operations which would not stand for a moment if submitted to the rules of business demanded by those in other countries outside of German control.

It has been said, in explanation of the easy placing of enormous war loans, that the capital formerly engaged in foreign trade, and now released, is free to be loaned to the government. It is not shown, however, that such capital is transferable. That employed in shipping is obviously locked up and earns nothing; and that used in producing articles for export, if not in fixed form, has been probably shifted to making war supplies.

Where war
loans come
from.

When it is added that there have been no new flotations to absorb accumulating capital, it is intimated that savings are going on at a rapid rate and that they can take up war loans accordingly on a great scale. So far as the statistics of savings-banks can be relied on, it would seem that, even in war times, the spirit of thrift has been amazingly stimulated.¹ Nevertheless, the savings-banks could have taken

Debt a
measure of
destruction.

need to do is to take your stock—or, if you have not yet received the stock, the receipt for the amount paid—to a bank, which will advance you 75 per cent of the nominal value, so that if you have 400 marks of the old war loan you can subscribe 300 marks in the new issue without paying a single pfennig. You can even subscribe four times this amount, *i. e.*, 1,200 marks, if you also leave with the bank the stock that you take in the new loan, in which case you will have given the bank as security 400 marks of the old war loan and 1,200 marks of the new war loan, together 1,600 marks, against a loan of 1,200 marks."

¹ In 1916 the deposits in savings-banks were said to have reached \$5,000,000,000, and by the middle of 1917 to have added \$625,000,000 more. M. J. Bonn, *ibid.*, p. 16. In March, 1916, Helfferich stated that \$1,125,000,000 had been withdrawn from the savings-banks to be invested in war loans.

but a fraction of the war loans. The largest subscriptions have come through the banks for their customers. In general, the war debt represents the amount of past wealth (to which labor and capital were contributory) which is now consumed and, when the surplus of goods above the necessities of life (arising out of the country's total productive efficiency) is used up in war, additional debt is no longer based on goods, but becomes merely an unsubstantial promise, based on future production, whose worth is problematical. If the debt is already over one-third of the total wealth of the country, it implies that at least one-third of that wealth has been consumed in war.

When the German savings-banks, whose funds are largely placed in fixed investments, or real estate, subscribe in large amounts to war loans, what goes on?

Safety of savings. Their investments are pledged to the loan bureaus, in return for note-issues with which payment is made to the Treasury for war bonds. The government pays out these notes for its expenses to Germans. The public possess a circulation, to that extent, based on savings-bank (not commercial bank) assets, probably in the main real estate. *Au fond*, how different is this money from the French assignats of unfragrant memory?

The German loan operations are obviously connected with the expansion of discounts, and with the steadily rising inflation of credits as shown in the accounts of the

Loans caused increased discounts. Reichsbank (see Chart V). On the placing of each loan the discounts show a sharp rise; but the borrowing at times of subscription is more strongly accentuated with each successive loan, that of the Sixth Loan showing an unprecedented use of discounts. In short, the resorts to credit

rise higher than should follow upon a steadily rising expansion of credit. These events at the Reichsbank are undoubtedly typical of conditions at other German banks. The whole movement of credit operations, however, stands out in bold contrast to that of the Bank of England (in Chart II). The steadiness of English discounts since October, 1915, and their low range as compared with those of the Reichsbank (being only about one-fifth as high) is striking and significant of the English as contrasted with the German system of credit. England does not borrow of its bank, and hence war loans do not upset the system of credit nor the currency.

The relation of treasury notes to the placing of loans is to be noted. The notes are taken in large amounts by all the banks. Before a new loan, when government funds are running low, the banks are working to increase deposits likely to be used in subscriptions for the new loan. Such temporary funds are invested for a time in treasury notes and later exchanged for bonds. When the government receives instalments on the new loan, it can then retire the treasury notes. Thus, like exchequer bonds, they are used to anticipate coming receipts.

As few persons understand the intricacies of public finance, it is explicable why German authorities, in order to remove doubts, should have offered an explanation to show that the enforced isolation of Germany caused by the war is an advantage in her financing of the war costs. It is regarded to be an advantage that her loans are placed with her own people; that the proceeds are spent at home; that all savings go into the national enterprise of war; that the economic strain of providing goods for export is absent; hence that the naval blockade of German ports has been a

Supposed
advantage of
keeping debt
at home.

blessing.¹ The argument seems to assume that foreign trade has in it no gains; that the destruction of wealth and capital in war is desirable the more it is confined to the German people. On this theory, a man who has lost an arm should congratulate himself on escaping the fatigue he might feel in using it. The loans are evidence of destruction in war which fall upon her own people; the reservoir of her goods has been drawn down, and no other country has helped her to supply the deficit; in the future her own people must deprive themselves of former satisfactions in order to pay the interest and possibly some of the principal of the debt; the lack of foreign credits has cut her off from present goods which she must supply by her own industrial efficiency; and if the whole population work harder and show greater efficiency than ever before, it brings no progress, because it is used up in compensating for war losses. No casuistry can save any people at war from the grim necessity of paying sooner or later for what has been destroyed. To carry the burden herself does not lighten it, nor does it avoid the sweat and toil of the exertion.

To a country whose absolute government gives it possibilities of taking great liberties after the war with the property and income of its subjects—which could not be exercised over foreign owners of its securities—the holding of its debt at home presents what may, in the German political code of morals, be called advantages. The socialistic absolutism of Germany goes so far as to make all wealth almost common property to be taken at will for national purposes. Without using the term confisca-

Possible
shifts to
escape debt
after the
war.

¹ Cf. M. J. Bonn, *ibid.*, pp. 14-17, 35-36. He adds: "German finance is merely a German problem. When the war is over the German people will not be indebted to foreign nations. They will not have to send abroad a large share of their annual produce in payment of their war debt."

tion, it might be possible, without the consent of security-holders and without the alternative of being paid off, to lower the rate of interest on imperial bonds. Such methods could not be applied to foreign holders. But a more extreme supposition may not be visionary. If the debt increases much more, when peace comes it might plausibly be said that the people have already paid for the cost of the war in the diminished consumption and sacrifices during its continuance, and that the taxation to pay the interest and principal of the debt in the future would necessitate such heavy taxation that the sacrifices would really have to be undergone a second time; that this heavy taxation could not fall on the poor, for they have little to be taxed; that the burden of taxation must fall on the rich, who, after all, are the very ones who hold the war bonds; that this slow way of removing the debt by taxation only takes from the rich to pay the rich. Therefore, why not accomplish the same thing at one stroke by asking the owners of imperial bonds, as a patriotic duty, to present their securities to the nation; avoid the inevitable taxation, which in the end would take away probably as great a sum; and with a clean slate start life anew? Millions of lives have been given to their country; why not induce others to give millions, or billions, of the war loan, to the same purpose? Since such a suggestion would be out of the question to foreign investors in German bonds, it may possibly explain why the financing of the war at home may prove to be an "advantage" after the war. The redistribution of wealth, however, caused thereby may be too great a moral disadvantage in the eyes of foreigners, with whom trade must be carried on in the future, to warrant such a blow to the credit of Germany.

Evidently no German financier even dreamed of a

war debt of such staggering figures. It was believed to be a matter of course that indemnities would be levied upon the defeated Allies; and the insistence upon annexations and commercial concessions is even yet a part of stubborn demands named in the terms of peace by the ruling element. Such confidence in victory was the basis of the financial policy of the empire by which no taxation was to be levied, while the actual expenditure for war was to be met by loans, soon to be paid off from indemnities. The fortunes of war entirely disarranged this scheme. Having once started by borrowing, the path ran down-hill. The only brake of taxation was hesitatingly and mildly applied. During the first year of war no new taxes were laid.¹ By the time the Third War Loan was offered, in 1915, Helfferich announced that it was not the policy of the government to increase the burden of taxation on the generation that had nobly given their lives, but by loans to throw the burden on future generations who would have profited by the sacrifices of to-day. Later, however, it became evident that income was not sufficient to meet the normal budget and also pay interest on a rapidly mounting debt.

¹ The normal revenues of the German Empire in 1913 were as follows (in millions of dollars):

1. Post and telegraph.....	\$208.4	Lamps and bulbs.....	\$3.7
2. Printing-office.....	3.9	Matches.....	5.0
3. Railroads.....	39.9	Beer.....	32.5
4. Various admin. receipts....	22.9	Cards.....	.5
5. Taxation:		Stamp tax on bills.....	4.9
Customs.....	169.8	Stamps (general).....	58.7
Tobacco.....	2.8	Increment tax.....	3.8
Cigarettes.....	10.6	Inheritance.....	11.6
Sugar.....	48.4	Miscellaneous.....	.5
Salt.....	15.5	6. Contributions for defense.	.2
Spirits.....	48.3	7. Contributions from the	
Vinegar.....	.2	states.....	12.9
Wine.....	2.3	8. Miscellaneous.....	95.7
		Total.....	\$803.0

Cf. Seligman, *War Finance Primer*, p. 123.

Moreover, it is to be remembered that Germany has relied more than other countries upon protective duties, which the blockade largely cut off.¹ The imperial government had retained the field of indirect taxation, while the several states relied mainly on direct taxation. Consequently imperial receipts fell off as expenditures increased. In March, 1916, Helfferich reported a deficit in the ordinary budget (excluding war matters) of \$120,000,000. Then he was forced to announce that they could not go on indefinitely "without being compelled to have recourse to new sources of revenue." Details of the fiscal operations after 1914 are not available. We know, however, that new taxes were imposed, yielding about \$125,000,000,² and in addition there were taxes on war profits. So far as can be ascertained, the new taxes could not have been sufficient to meet the charges on the increasing war debt, for in placing the Sixth Loan a part of the principal, as already noted, was set apart for the payment of interest. To pay interest from the proceeds of new loans is obviously to be regarded as an evidence of fiscal weakness.

Deficits.

How long can Germany go on building up an enormous debt, now increasing at the rate of \$750,000,000 per

¹ In 1912 England received from customs duties \$168,000,000, Germany \$164,000,000, and France, \$132,000,000. From protective duties, 15.4 per cent of total revenue was obtained by Germany, as against 9.9 by France, and 0.4 by England. *Ibid.*, p. 107.

² It is reported that the new taxes were increases on postal, telegraph, and telephone charges; on bills of lading; a new tax on business profits; a non-recurring tax per mill on all property above \$5,000; and a special tax on increases in real-estate value exceeding \$750 a year.

In February, 1917, Count von Rödern proposed other taxes of 2½ marks on coal, and a levy of 10 to 16 per cent on railroad tickets, and 7 per cent on all freights.

He also announced that the annual (normal) budgets had been published as usual during the war, but that the expenditures of the army and navy did not appear in them. The maximum of these expenditures, he naively added, could be ascertained by the total of war credits voted. *Cf.* p. 263, n. 1.

month, or \$9,000,000,000 a year? Much attention has been given to an earlier statement by President Havenstein of the Reichsbank that the end would come when the debt had reached \$25,000,000,000, since the interest charge would then be all that the people could carry besides the normal expenses of the state. That has already been reached, and the end is not in sight. What must be the outcome?

It is sometimes supposed that the war must come to an end because of economic exhaustion. But what is economic exhaustion in this sense? If a railway becomes

Will
economic
exhaustion
end the war? bankrupt, why can it continue in operation under a receiver? Evidently because it can go on, hoping for better times, as long as it can pay running expenses and no more.

Similarly, Germany, even if insolvent, can go on fighting so long as she can provide munitions and men, with the necessities of life at least for the fighters. She can turn all her surplus wealth by forms of credit into means of payment, subscribe for loans, and thus transfer the whole wealth of the nation to the government to be used up in war. Only in this way can we account for the floating of such enormous loans. They now exceed one-third the national wealth. But that fact will not stop the war for economic reasons, unless that outlay is increased to a point which is admitted to equal the whole surplus of the country's wealth over the minimum of existence for all. It is not fully realized how vast is the excess of modern production, due to invention, new power, and machinery, over the bare necessities of life. All of this could be given up before economic exhaustion would stop the war. Only the primary needs—those for healthful food, clothing, and shelter—must be satisfied to maintain physical energy. We cannot tell whether

Germany has been reduced to these minima, or not. Building has largely ceased, but existing housing is undoubtedly ample. Clothing can be economized, if fashion be not observed. As to food, it is not easy to get reliable data. Although many foodstuffs are scarce, possibly a minimum for all may be provided, if it is successfully distributed. Probably the poorer classes are suffering great hardships, because no organization can be everywhere equitable and efficient. But grant that starvation can be prevented. So far as economic reasons are concerned, then, the war can go on as long as munitions can be supplied, and until the German army is worn down by attrition to numbers that cannot protect the military lines.

It is doubtful if much light would be thrown upon the question by the usual consideration of the figures of debt, and national wealth or national income. The contrast is often made between the heavy annual charge for the debt, added to normal budget expenditure, with the national income to show that the burden is getting too heavy to be carried. Helfferich, in 1913, made out the total national income of Germany to be \$10,000,000,000, of which about \$2,000,000,000 may be regarded as net annual income. Against this is a charge already for debt alone, at 5 per cent, of \$1,500,000,000, and a budget of over \$800,000,000 besides, thus taking up more than the net income in time of peace. Also, he estimates the national wealth at \$75,000,000,000, with which a total debt on the German people of over \$30,000,000,000 is to be compared. Such comparisons for the purpose of estimating the duration of the war are mechanical. They convey little as to the psychological situation. The Germans can go on fighting longer if they are willing to sacrifice all their wealth, and retain only the bare necessities of life. All depends on

Annual
income no
clew.

the spirit to sacrifice. The burden of debt is significant only as it affects the will to continue. The ruling class are expert in tempering the purpose of the people to any plan they have in mind.

The decision, therefore, is largely dependent on a political or psychological quality. Will the German people support the war policy of their rulers, in spite of the increasing slaughter of fathers and sons, to the point of denying themselves all habitual consumption down to the minimum of existence?

Duration of
the war a
psychological
question.

Or may not the ever-present pressure of deficient consumption and—above all—the constant, sickening loss of life be actively forcing a consideration of the reasons for continued fighting? In that way peace may come before even the minimum of subsistence is reached. It is a psychological question. The Germans have unity, industry and a disciplined readiness to yield to leadership. Their thrift can work wonders, if pushed to the extreme. It is only because their abstention from unnecessary consumption is so great, and so fully under control, that the enormous, potential surplus of modern production can be given over to the war in return for bonds. So long as the patriotic disposition exists to assume more debt, even on a declining total of production, then new loans can be placed. That is a means of postponing the economic reckoning to the future.

By credit operations losses are thrown forward on the future. Germany's borrowing power (in this case at home), her credit, depends upon the belief of lenders in her producing power, not in the exceptional emergencies of war, but in normal conditions of peace. Her ability to carry her staggering burden, therefore—if she does not repudiate—depends upon her power to produce in the future. Then will come

Possible
recovery
after war.

into play, under conditions which will stimulate them to the utmost, her characteristic persistence, thrift, organizing power, energy, and industrial efficiency. If exceptional reasons exist for restoring capital, and the effective desire of accumulation becomes intensely active, it would be possible to add to capital almost all the annual surplus of wealth above necessities, and in a surprisingly short time there would be as much capital in existence as before; and then could begin again extravagance and waste, and the loss of capital in overconfident speculation. Also, in spite of the frightful losses of man power, we all know, when restraints upon population are removed, with what amazing rapidity numbers increase to the point where they are limited only by the standards of living. Whatever the outcome of the war, there is not much doubt of the continuance of racial characteristics in the typical German residuum.

CHAPTER VI

WAR AND CREDIT IN NEUTRAL UNITED STATES

The interdependence of commercial countries—The United States a debtor nation—Our credit not expanded—Selling of our securities and exports of gold—Cause of the crisis of 1914—The credit system—Return of our securities by foreigners for gold—Pros and cons as to closing the stock exchange—Stoppage of international trade—Gold shipments—Confusion in the exchanges—The domestic drain—Shock to internal trade—Necessity for lending freely—Assets unliquid—Clearing-house loan certificates—Aldrich-Vreeland notes—Expansion of loans—Falling off of imports—Exports decline, then rise—Cotton—Cotton pool—Countries to which increased exports went—South American trade—Balance of trade—Movement of securities—Exports of gold—Gold pools—Items offsetting exports of goods—Loans to Europe—Exchange on neutral countries—Dollar exchange—Inflation—Federal Reserve system—Causes of high prices—Effect of war on saving—Loans to foreign countries.

§ 1. In studying the effects of so unparalleled a war, nothing is more striking than the bright light it throws upon the familiar truism regarding the close interdependence of one industry upon another, and of one industrial and commercial country upon another. This interweaving of economic relationships had been going on ever since division of labor and exchange of goods between different countries and climates began; it grew with every development of new machinery and the opening up of new sources of materials for manufactures in all parts of the world; and with the cheapening of efficient transportation, by rail and by ship, the close ties of trade have multiplied a thousandfold, uniting remote towns and

Interdependence of industry and credit.

hamlets with the centres of trade and exchange. But these ties may be more accurately described as the results of the interdependence of credit. As a consequence of the exchange of products, credit obligations have been entered into which bind men together in every branch of trade and in every commercial centre throughout the known world. So strong have been these bonds that they have often kept nations, even on strong provocation, from entering into war.

In the years preceding 1914 the credit obligations which bound us to Europe were mainly those of a country owing large sums both on permanent investment and on current trade account to transatlantic creditors. We had borrowed to build our railways, to open our mines; in general, to develop our resources; so that the market for capital in London or on the Continent affected us closely.¹ Even our largest municipalities had floated temporary loans in London or Paris.

Nature of
our credit
ties to
Europe.

Moreover, we had been relying upon foreign capital to move our exportable crops, such as cotton and wheat, to European markets. Even at the risk of repetition the

¹ As a practical illustration of our credit dependence on foreign markets, the president of a large American railway informed the author that his request for a loan of three or four million dollars in New York was held up by the Argentine crisis arising from an expansion of *cedulas* in 1891 and the consequent inability to liquidate obligations in London, especially those of the Baring Brothers, who had invested largely in Argentina. He found that a rival road in western competitive territory was cutting rates and taking away his traffic, quite against reason and repeated offers to adjust the situation. The rival road, it seems had orders to swell receipts in every possible manner, because its securities, largely held in England, and being of high standing, were just then being sold in American money markets as the best means of realizing cash resources for the Barings. Hence, the necessity of making a good showing in receipts while foreign holdings were being disposed of in New York, and the consequent poor showing of the president's own railroad which made a loan to him difficult. Thus the relation between Argentine *cedulas* and railway rates and credit in the Pacific coast territory of our own country was direct and inevitable.

use of international forms of credit may be briefly described to fit the American situation. The exporters of our products, at the time of shipment, drew bills on the foreign buyer payable, say, at sixty or ninety days, for the value of the cargo, accompanied by bills of lading as documentary proof of the transaction. Even before the shipment reached the other side, the bill would have reached the foreign purchaser, who, by writing his name and the date across the bill under the word "accepted," made of the bill an acceptance. By this act the

For
marketing
our products
abroad.

bill became the obligation of the acceptor. Frequently the buyer arranged with a bank to accept such bills for him. Such paper became discountable at any foreign centre where the standing of the acceptor was known. By this process we got the use of foreign capital to move our cotton or wheat crop. The American exporter, as soon as the acceptance was discounted in London, or Hamburg, as the case may be, had a credit to his account abroad. He could draw sight bills on this sum, sell the bill to an American bank, and obtain a credit here. By so doing, he released his own capital immediately, while the burden of waiting until the foreign buyer paid off the bill was thrown on the foreign lenders of capital. Usually, he could employ his capital here at a higher rate than that paid for the foreign discount. In such credit operations our annual exports of cotton alone called for \$300,000,000 to \$400,000,000. To this must be added the sums for moving wheat, copper, materials, manufactures, and all kinds of exports, amounting, in 1913, to nearly \$2,500,000,000.

It may thus be realized how dependent our own country is upon the uninterrupted payment at maturity of the enormous volume of credit obligations owed to us,

or of those owed by us for imports which are used as an offset against our exports. As a debtor nation our exports ought normally to exceed our imports; but if there is a balance against us, it may be covered by the sale of securities, or carried forward by other forms of indebtedness to Europe. Only if all the items in the international account fail to balance then as a last resource gold is shipped; but in the long run we are able fundamentally to pay for our imports of goods and for our financial obligations by our exports of merchandise of various kinds. So heavily had we borrowed from abroad that the volume of American securities owned in Europe before the war was variously estimated at from \$4,000,000,000 to \$6,000,000,000. If Europe distrusts us (as she did when we nearly drifted on to the silver standard in 1891-1893), or if she needs the capital at home, she withdraws her capital by sending our securities home and calling on us to pay for them; and pay we must, either in additional exports of our products, or in exports of gold (the only money which is to-day a solvent of debt in international trade). The countries which have held the most of our securities, that is, the countries which have loaned us the most, have been England, Holland, and Germany.

The depression in the money markets of Europe ever since the Balkan Wars had its counterpart in the United States. The bank reserves, especially of southeastern Europe, had been depleted by frightened depositors to the amount of several hundreds of millions of dollars; securities had been declining in price, and lending was much restricted by the feeling of uncertainty. The corresponding depression in the United States, while not so severe, reflected the European situation. It was not easy to place new securities or to

Our
borrowings
from Europe.

Depression
before
the war.

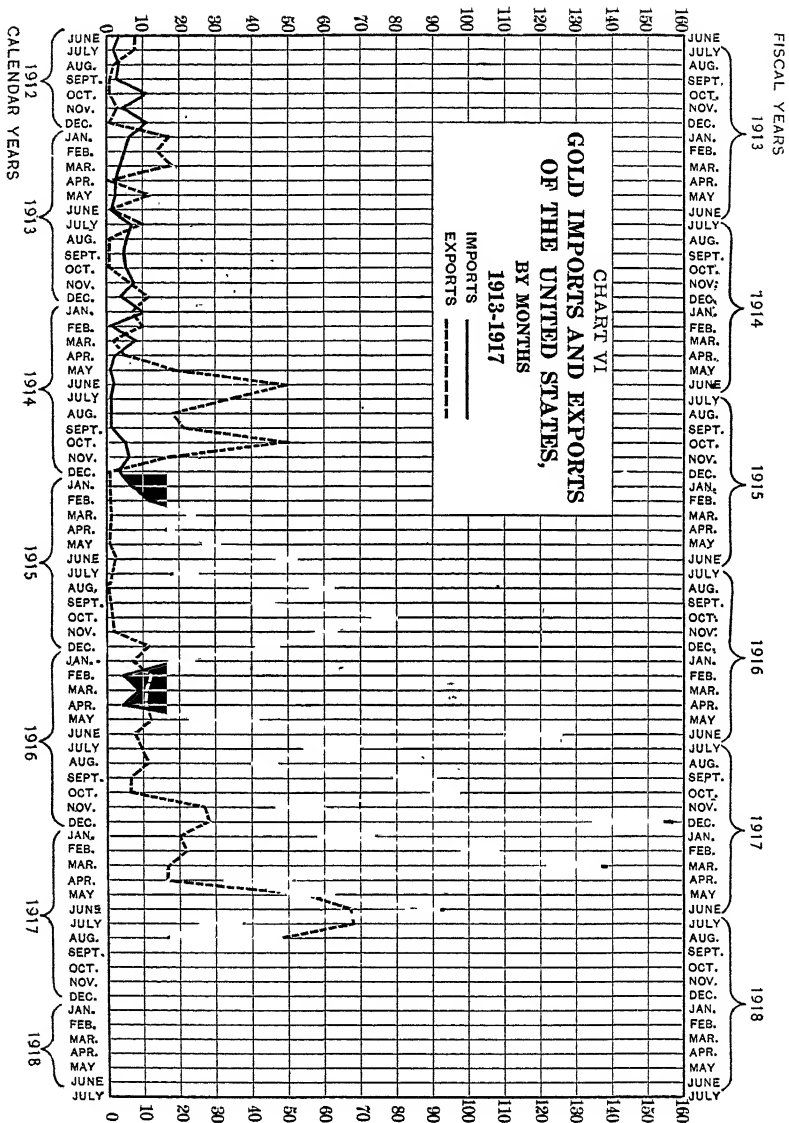
obtain new capital. There was a general tendency to avoid new enterprises. The crops of 1913 had been scant, and the prices of food were high, followed by a demand for higher wages; public interference with business and dissatisfaction with the manner in which the railways had been regulated had caused a feeling of depression; and the long session of Congress, which had been busy on ways of controlling competition in industry, had created a state of uneasiness. In addition, the policy of "baiting" the railroads and other corporations had injured the credit of borrowing organizations. Large as were our own accumulations of capital (which had been growing rapidly), they were not large enough to develop all our resources; so that our present scale of operations, with their increasing needs, could not be carried on as effectively as in the past without obtaining very considerable supplies of capital from Europe. Any events which would restrict the lending power of countries closely related to us would directly affect our supply of capital. Thus, it happened that there had been a liquidation of securities going on and a hesitant industrial policy adopted by us for some years; and when the European War came, fortunately it did not find us with extended credit. In all essential matters business conditions were normal and sound at home.

It is now obvious that in the summer of 1914 Continental capitalists, especially those of the Central Powers, were earlier informed than we of what was imminent.

Exports of
gold early
in 1914.

There had been off and on a movement of our securities from Europe for realization in our markets. In the early part of 1914 our exports also fell off, which, with the sale of foreign holdings here, led to a balance against us, making it profitable to export a considerable amount of gold in May and June.

BY MONTHS
1913-1917



(See Chart VI.) Thus already coming events were casting their shadows before. The exports of gold would not have taken place at this time before the war without the premeditated selling of securities in our markets by Europeans who foresaw trouble. But, irrespective of the selling to us of our own securities, there was a large balance already due by us to Europe, based upon the large imports into the United States from March to September, 1914, when imports of merchandise even exceeded exports (see Chart VII); expenditures of Americans abroad; payments for ocean freights; former borrowings from Europe; and the recent placing of our securities there. The exceptional international trade situation, which for so many months in the spring and summer of 1914 reduced our exports of goods, had not been equalled for many years and has not since been repeated during the war.

These events came upon us as a neutral country. At that time we had not the remotest intention of joining in the struggle. The study of our credit operations, during the war, therefore, obviously divides itself into (1) those occurring during the period of our neutrality, and (2) those arising later from our participation in the war. In this volume attention will be confined to the former.

§ 2. The crisis of 1914 in the United States on the outbreak of the European War was in every way different from any other in our history. Because of unsettled conditions of credit for several years our business had been restricted, speculation was absent, and banks were in a sound and conservative position. An overexpansion of credit which has usually preceded our panics (as in 1907) did not exist. In other words, it was not a credit panic; although the effects of the war, of course, reacted on credit. A series

War and
credit.

of events which interfered with the normal movement of goods, securities, and gold inevitably struck heavy blows at the very bases of all credit. The war thus affected credit, but only through its effect on the production and exchange of goods. It is, therefore, not possible to distinguish between the effects of the war on credit and the money market, on the one hand, and those on foreign commerce, or domestic production and trade in goods, on the other; because all were closely united. Nevertheless, for the sake of clear exposition, it seems advisable to recount and explain first, since their appearance is first noticeable, the disturbances in the world of credit and money.

The sensitiveness of credit operations to coming danger, since one of the chief functions of credit has been to discount the future, records itself, even before industry has been directly affected, in the markets for capital and securities. When we speak of our credit system we mean the machinery by which capital is passed from those who have it to those who, through borrowing, show an effective demand for it. Institutions that supply capital are usually banks: (1) Investment banks (trust companies, savings-banks, and even those commercial banks which mix investment with legitimate banking) provide capital for long-term uses, with which we are not now directly concerned in this study; and (2) commercial banks, which in their legitimate function provide capital for short-term uses mainly connected with dealings in staple goods, and with which we are now directly concerned. The whole business public is dependent on commercial banks, for the simple reason that industry and trade are largely carried on, and legitimately so, by borrowed capital; in proportion as a firm produces more goods, or buys and sells more goods,

Credit in proportion to dealings in goods.

it is *pro tanto* entitled to, and usually gets, more loans from the banks. That is, legitimate credit normally expands or contracts with the increase or decrease of transactions in goods. Credit does not increase capital; it facilitates its movement. Capital, made up of the funds to be devoted to getting an income mainly in connection with the production and exchange of goods, is the fundamental thing; credit has to do with the marketing of capital.

The Continental markets in which securities are bought and sold were already recording seismic shocks, as we have seen, as early as April and May. In this country there seems to have been a general belief that the danger of a general European war would be averted, as it had been so often before.

Pressure of
selling on
New York
stock-market.

Discount rates, foreign exchange, and preparations for dealing with a coming record-breaking wheat crop, as well as a very large cotton crop, showed normal conditions even as late as Monday, July 20, 1914, when Germany's position regarding Serbia was announced in Vienna.¹ On Wednesday, July 22, when the ultimatum to Serbia was despatched, the situation became serious. Now began an increasing volume of sales of our securities in the New York market for the credit of foreign holders. The very fact that we were not involved in the war made our markets the best in which to sell. Europeans in stress were recalling the capital they had loaned to us; and they drew on their new credits here, necessitating enlarged exports, either of goods or gold. As early as July 13 the prices of securities had been falling. This meant the weakening of accounts carrying securities. By Monday, July 27, it was evident that Germany and Austria-Hungary intended to use the Serbian matter as a means

¹ Cf. Chronology, p. 79.

of forcing Russia's hand, or go to war. Then, as we have seen already, the foreign exchanges collapsed. On July 28, when war was declared against Serbia, enormous sales of securities were made on the New York Exchange by foreigners. Selling by frightened American owners and short sales by bears also added to the depression in prices. The situation went from bad to worse. On the 29th practically all the markets on the Continent had been closed. In this country there was as yet a naïve failure to appreciate the gravity of the danger. On Thursday, July 30, the frantic efforts of Europeans to realize on their securities in cash concentrated the selling upon New York, the one best remaining market in which to sell. Even then there was a stubborn belief here that our power to absorb securities could stand up against this strain.

It is to be recalled that already forces were at work connected with our merchandise account, which of themselves would have led to the export of gold for good and sufficient reasons. The war added new forces working in the same direction. Such an avalanche of selling orders from foreigners had a significant effect on our banking reserves and so on the lending power of the banks. The selling and buying by domestic holders of securities, whose accounts were carried with our own banks, from whom they have borrowed to carry stocks, did not reduce the aggregate stock of gold held among the lending institutions.¹ But the selling, as in this case, being by foreigners, and the international situation being such that we could not at once command gold on finance bills, or otherwise, in South America, Asia, or any non-European markets, the imme-

Selling must
be stopped.

¹ Cf. O. M. W. Sprague, "The Crisis of 1914 in the United States," *American Economic Review*, September, 1915, p. 510.

diate effect was to create here a demand for the exportation of gold, just at the outbreak of a crisis, when there must be an inevitable and very urgent pressure for loans from our own bank customers. Hence the selling must be stopped in the interest of our own borrowing public. On the face of the situation this pointed to some such drastic action as the closing of the stock exchange.

Against this action it is to be urged that it would impound, or render unliquid, all bank assets consisting of stock-exchange collateral; that there would be no way of calling in, or contracting, the volume of such loans to meet new conditions; that the weaker banks caught in a sudden emergency could not shift loans to stronger banks by selling securities, or calling their loans; and finally, that if banks chose to make loans on stock-exchange collateral (which in Europe bear a higher discount rate, as being less liquid even in normal times), they should take their medicine bravely with all its consequences, even if it led to an earlier and larger issue of clearing-house loan certificates as a last recourse. On the other hand, the closing of the stock exchange would stop at once the further creation of any additional indebtedness for foreign account, which already had reached alarming proportions; and it would prevent any further decline in the prices of securities, likely to be offered in wild excitement and panic, and thus prevent the crumbling away of the market values of collateral held by the banks and save a legion of borrowers from failure if loans were called.

Pros and
cons as to
closing the
stock
exchange.

Such were the alternatives which presented themselves on Thursday, July 30. As in every crisis, the banks of a country having international relations had to face two drains upon their reserves: (1) the foreign and (2) the do-

mestic. The deluge of selling from abroad had the direct effect of a run on our stock of gold for exportation, the insistence of which could not be controlled by the ordinary means of raising the rate of discount for loans. If selling continued, there was nothing to do but to export larger amounts of gold, which would weaken the fabric of our credit. The purchasers of the securities thus thrown on the market would have to be granted loans, as well as those customers of the banks whose position had been made insecure by the sudden crisis in business. An effective way to meet the foreign drain was to close the stock exchange. The problem was one affecting banks and the whole borrowing community, and not merely the dealers in stocks. But the standing of our securities would be seriously shaken if it were shown that they were refused a market on our own exchanges, and could not be taken up by us when sales were desired. The only reply to this was that the juncture was unparalleled and beyond all normal treatment. Under these difficult conditions, American optimism, on July 30, had still hoped for a prevention of war. On the afternoon of that day it was decided to take no action. No collapse had taken place and no money panic had appeared. On Friday morning, in consultation with London, after it was known that an immense volume of selling orders from all over the world hung over the market, it was decided only four minutes before the usual hour of opening to close the stock exchange until further notice.¹ The exchanges in other cities followed suit. Thus was accomplished the task of cutting off, in spite of certain disadvantages, the exceptional foreign drain on our gold stock. It did not,

Foreign
drain.

Closing of
the stock
exchange.

¹ Cf. H. G. S. Noble, *The New York Stock Exchange in the Crisis of 1914* (1915), p. 12. Only once before, for ten days in 1873, had the exchange ever been closed.

however, prevent the exportation of some gold, but it did keep it from going to an extreme which might have seriously endangered our ability to maintain gold payments.

This war between so many nations closely connected with the United States by international trade struck at the very basis of credit, not only by unsettling the ownership of securities, but by the interruption and even in some cases by the actual stoppage of the international movement of goods. The effect of the European War on our foreign trade has been surprising, never equalled, and startling in the magnitude of its changes. Never before have we had such an upheaval. Problems have accordingly arisen which could never have been anticipated. Not only because the seas became unsafe, but because the usual markets for goods were either cut off or thrown into confusion, at once exports and imports of merchandise lost their normal relations, means of payment became uncertain, and the foreign exchanges were paralyzed.

Startling
upheaval of
trade.

Imports into our country had been declining since March, 1914, and by December they had reached the lowest point in five years, or about \$70,000,000 below the previous December. Europe was unable to send us goods, and, of course, in a time of such disturbance we were unwilling to buy.¹ The

Early drop in
both imports
and exports.

¹ The imports of goods from various countries in the fiscal years ending June 30 of 1914 and 1915, were as follows (in millions):

	1914	1915
Austria-Hungary.....	\$20.1	\$9.7
Belgium.....	41.0	10.2
France.....	141.4	77.1
Germany.....	189.9	91.3
Russia.....	20.8	2.5
Great Britain.....	293.6	256.3
Cuba.....	131.3	185.7
Argentina.....	45.1	73.7

brief upturn of imports in September and October was due to the belated arrivals of goods ordered before the war. The general decline in imports was recuperative, as far as it went, inasmuch as it reduced the sums which otherwise would have to be paid to Europe. So, also, was the stoppage of American expenditure for travel in Europe then brought to an end by the war. But our exports also fell off sharply in August (see Chart VII), and, although they gradually picked up again, it was December before our monthly exports reached the level of the preceding year. Thus the war first hit directly at our exports, on which we might have depended for support to our stock of gold and to the foreign exchanges. Not being able to draw on credits for goods sold to Europe as formerly, and having heavy drains on us for sums due on securities returned to us, the only means of meeting our immediate obligations were by shipments of gold.

Acute
demand
for gold.

So acute was the demand for gold to meet international payments that the price of exchange rose to a height before unknown. In effect, of the items entering into the international account (movement of goods, securities, ocean freights, travellers' expenditure, and the shipment of gold), those of goods and securities were so overwhelmingly against us that the foreign drain on our gold persisted in full force.

Since this crisis of 1914 was characterized chiefly by its international features, and indeed might be named an international crisis, the effects upon our foreign trade

Interrelations
of credit.

—which, although large and important, is after all only about one-seventh of our domestic trade—had an importance out of all proportion to its quantitative relations. Indeed, the workings of our foreign commerce not only indicate the interdependence of our trade with that of other nations,

but also bring out the vital interrelations of credit. International trade and credit have become the nerve-centres of our system, since they provide the machinery by which we have been supplied with billions of dollars of foreign capital. Our domestic production, transportation, and distribution of goods could not have become what they are without the aid of foreign capital invested here in former years.

Although we had the largest wheat and cotton crops in our history, the outbreak of the war prevented exportation. European crops in 1914 were short, and our breadstuffs were in urgent demand; but, although a neutral nation, we had very few ships. We had been using British and German lines as our chief commercial carriers; consequently, when German and British war-ships were raiding each other's commerce our trade practically stopped. Moreover, no insurance for cargoes could be had, because the war risks were too great to be carried by private capital; and this situation obtained until the governments of Great Britain and of the United States established marine insurance departments and wrote insurance on ships and cargoes. As soon as the superior English navy drove the Germans from the Atlantic our exports could move.

Meantime, the period when all trade and credit were interrupted was a critical one for us in many ways. Since exports could not move and thus create bills of exchange (or claims on funds in Europe), the final resort was the shipment of gold. But, for a time, even the sending of gold was made physically impossible. The German steamship *Kronprinzessin Cecilie*, bearing about \$12,000,000 of gold from New York, chiefly for London, narrowly escaped capture and put back to a safe port in the United States.

Shipping.

Overseas
shipment
of gold
impossible.

As a result, American banks, although having the gold to pay with, had to default in payment of gold obligations due in London. It was an unprecedented situation for our credit institutions.

Since gold could not be sent safely, our country, although maintaining the gold standard, found itself for a time in the extraordinary position of not being able to meet its bills of exchange when due. When the shipping-point disappeared this part of our international currency became irredeemable, and it depreciated. The frantic demand for exchange on Europe to pay our maturing debts, or to cover the expenses of travellers then abroad, sent up the price to unheard-of figures (\$7 having been paid for £1, whose par was \$4.8665). In the absence of gold payments, our bills could depreciate to any point fixed by the demand for European funds. They could return to par, or to normal quotations, only when gold was sent (see, later, the account of the Gold Pool), or when exports could move. A considerable exportation of goods was the only effective and permanent restorative. The international balance against us, falling due before January 1, 1915, was estimated to be about \$450,000,000.

At the same time, the war had so disturbed all industry and trade at home that the domestic drain upon our credit institutions was also disturbing in the extreme.

The domestic pressure upon the banks was two-sided: (1) the withdrawals by depositors, and (2) the increased demand for loans. In a very short time the reserves of the New York Clearing-House banks (August 15) were \$47,999,250 below the legal limit.¹ As always, in a time of stress, not only in-

¹ The United States has no representative central institution of credit, such as the Bank of England or the Bank of France, through which the condition

dividuals and firms but country banks drew down their deposits (in central reserve cities). A disturbance of the money market was certain to cause small banks to enlarge their cash resources at home; and, even if members of the Federal Reserve system, they are still likely to maintain this habit, in spite of the fact that they can better enlarge their reserves by rediscounts at their reserve bank. Moreover, the reserves of the banks had already been depleted by the very considerable exports of gold in April and May, 1914.

The shock to industry at home was benumbing. Men of affairs were taken by surprise, filled with a great uncertainty. Every one, in alarm, suddenly stopped all buying that was not absolutely necessary; new constructive work was suspended; purchase of machinery and equipment almost ceased. Operations in the oil-fields were restricted; the iron and steel industry and the copper-mines were working at perhaps one-half capacity. Most goods on the shelves being unsalable, merchants could not repay the wholesaler or the producer. Mills and furnaces having no market for their products ceased to work, and laborers were thrown out of employment. Therefore, if buyers of goods no longer paid those who had borrowed from banks to carry goods, the borrowers could not pay off their notes now maturing at the banks. Business men had been legitimately borrowing from banks to get capital to meet current needs for materials, wages, or to carry finished goods in warehouse or in transit. It was a criti-

Critical
business
situation.

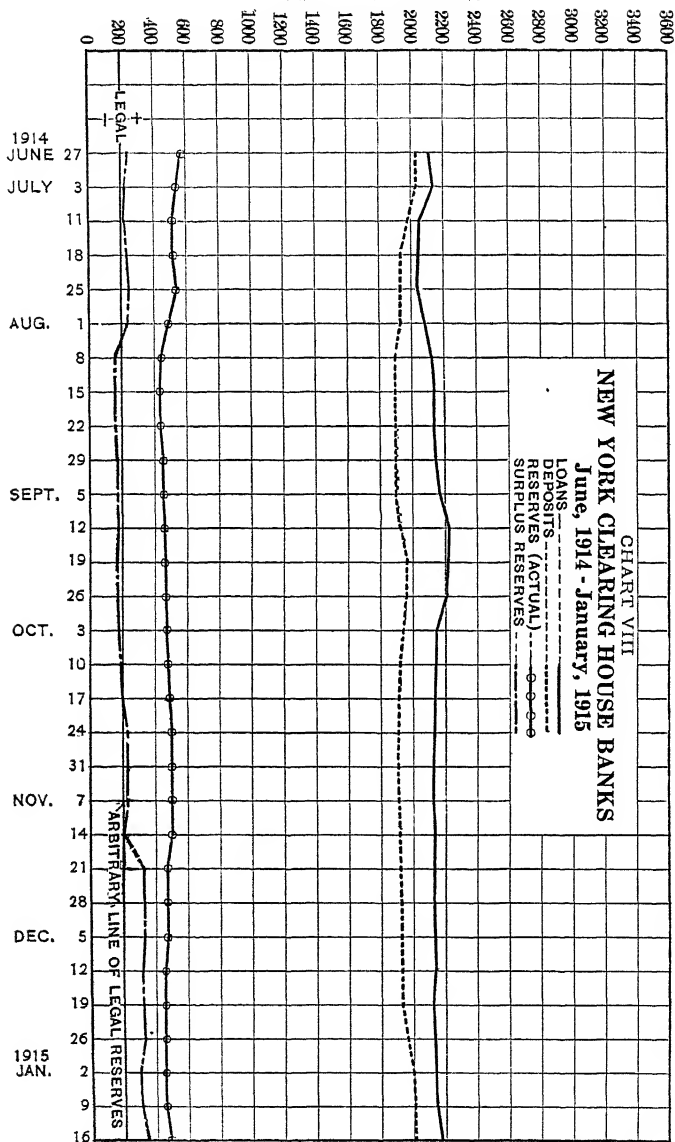
of credit in the whole country is reflected. The nearest index of that sort we have, whose accounts are typical of others, is the association of banks in the New York Clearing-House. The Federal Reserve Banks do not fill a corresponding function, for they are detached from the general field of discounting. Their member banks, moreover, which include the national banks, did not at this time do more than one-half the banking business of the country.

cal and momentous time for them. The inability to make collections, or to obtain cash for securities after the closing of the stock exchanges, did not change the fact that engagements entered into before the war and now falling due must be met, or business ruin must result. No goods nor men nor resources had been destroyed. Business houses had goods, but not that which would pay debts. So far as actual money was concerned, there was as much in the country as ever before. The outstanding need, in truth, was for a means of payment by credit. Not only must existing loans be extended, but new loans on a large scale must be granted in order to prevent failures, just at a moment when the reserves were being drawn down by both a foreign and a domestic drain. The real need was for a loan, not for more money; if a man had a loan he could pay his debt by a check. All depended on the lending power of the banks. Yet any devices which would obviate the necessity of paying out gold, now so urgently demanded for export, would help to lighten the domestic drain. These devices will be explained hereafter (§ 3).

Under these conditions of a credit crisis, suddenly to constrict loans to the business public would have been like shutting off air from men's lungs. The only salvation for a bank is to do that which will save the quality of its assets; that can be done only by preserving the solvency of its customers whose assets it holds. Therefore, when everything looks black—and for that very reason—it is in the joint interest of both the bank and its constituency to lend freely. Credit is the means of throwing the burden forward and saving borrowers from present liquidation in alarming and panicky conditions; it gives them time to realize. And yet the very first result of new loans (in the face of

Reason for
lending
freely.

MILLIONS OF DOLLARS



dwindling reserves) is to give borrowers deposit accounts on which they can draw the proceeds of the loan. That is, new loans immediately increase the demand-deposit liability, and thus lower still further the percentage of reserves to demand liabilities. But loan they must, even if reserves fall far below the legal limits. (See Chart VIII.)

In ordinary crises, when cash reserves run low, banks may increase the percentage of reserves to demand liabilities by calling loans and thus reduce the volume of demand items; or they may dispose of some high-grade securities in home or foreign money markets for gold or lawful money. In 1907 the New York banks thus imported about \$116,000,000 of gold, and they obtained lawful money by deposits from the United States Treasury. But in the crisis of 1914 neither of these things was possible. Gold was being fiercely demanded of us. Moreover, the falling off of our imports directly touched the income of this country, which, like Germany, depends so largely upon customs duties; and our Treasury ran so low that a new War Revenue Act was passed October 22, 1914, to obtain necessary funds. Nor was this all. The usual calling of loans was impossible for special reasons. The assets of our banks fall into two general classes: (1) securities held as collateral, and (2) paper based mainly on the actual sale of goods to the trade. In regard to the first, the war brought home the old, sad lesson that in great emergencies the loan account based on stocks and bonds is not liquid. The prices of these securities, when thrown upon the market in great volume, fall to a ruinously low level; buyers are few. In this crisis, however, as we have shown, the stock exchanges were closed, and there was no market for them. In short, all such assets became sud-

Assets
unliquid.

denly frozen. By common consent the banks did not call collateral loans and carried the collateral at the minimum prices of July 30. Thus liquidation and bankruptcy were so far avoided. As to the other class of assets, the unexpected check to industry and the interruption to the movement of goods, already described, made most of these for a time unliquid. The banks had the legal right to enforce payment; of course they did not exercise it, and loans were extended. That is, while the usual tests of solvency were held in abeyance, the benefit of credit postponed liquidation and gave time for reconstruction and recovery. It is incorrect, therefore, to say that in this crisis credit was paralyzed.

Credit saved
the situation.

It was precisely the working of credit that saved the day. It is but simple justice to record that the men in charge of the banks and the credit system, in contrast to the action of the English joint-stock banks, rose to the occasion. In spite of the unprecedented shock, the unliquidity of assets, the assaults on our gold reserves, they loaned freely, even if reserves fell below the legal limits; prevented failures; and gradually again set in normal motion the machinery of credit by which capital could be obtained.

Complicated as the situation seemed to be, the relation of cause and effect was clear. The sudden closing of the markets for securities and the stoppage of the international movement of goods threw the foreign

Sequence
of events.

exchanges into such extreme confusion that they could be righted only by the exportation of gold. If gold were sent, it would reduce the lawful reserves at the time supporting our credit fabric. Hence would follow a direct effect on our credit and then on our currency. If the banks were facing heavy demands for cash, not only by a foreign drain through withdrawals of

gold for Europe, but also by a domestic drain because of difficulties at home, they could protect their reserves and thus preserve their lending power only by some device, which would give them forms of money acceptable to the public and obtainable in the special emergency by use of their approved commercial assets. Such a device would be effective, not merely because it increased the quantity of money, but only because it enlarged the lending power of the banks. It is our next task to explain how, in fact, this was actually accomplished.

§ 3. We have had other crises, in which it was necessary to aid the weakened lending power of the banks. To save us from runs on deposits and to quickly turn good assets into reserves the Federal Reserve Act had been passed December 23, 1913. But the new system—due to unnecessary delays—was not in operation when the crisis of 1914 came upon us. Consequently, in order to make liberal loans, even when the reserves were far below the legal limit, it was necessary to loan in spite of the law regarding reserves under an antiquated banking system. Banking self-preservation and the needs of borrowers forced it.

In such circumstances inevitable resort was had to a device as old as the crisis of 1861. The lending power of the banks was enlarged by the issue of clearing-house loan certificates. Whenever a bank found its reserves down to the minimum, and hence its power to lend restrained, it could take picked assets from its loan account to a committee of the Clearing-House Association and obtain clearing-house loan certificates, bearing 6 per cent interest to the amount of 75 per cent of the value of the pledged assets. In a word, commercial assets were coined into a

Issue of
clearing-
house loan
certificates.

partial means of payment. It was but a partial means, because these certificates could be used only for paying balances between the banks. They were not paid out by banks to the public. Moreover, they were good only within the group of banks belonging to a given association and not available in payments between banks of different groups.

The effect of the issue of these certificates was to relieve the banks from the necessity of contracting, or of refusing, loans. As a matter of fact, loans could not be much con-

Effect on
the power
to lend.

tracted, because such assets as consisted of collateral were locked up. How, then, did the resort to these certificates increase the lending power of the banks? In granting a loan, a bank already hard-pressed straightway must give the borrower a deposit account on which he can draw. That action increases the proportion of demand deposits to cash reserves, and still further weakens the bank's position. If the borrower draws a check on his new deposit to pay a pressing debt, that check is certain to come back at once through the clearing-house; and, normally, the bank without offsetting checks due it would be obliged to meet its adverse balance in cash. To save the depletion of reserves, however, a bank is now permitted to pay its balances at the clearing-house in certificates. Such a device is, in effect, a suspension of cash payments between the banks.

The first loan certificates were issued by the New York banks on August 3, and the last were cancelled on November 28, 1914. The aggregate issue was \$124,695,000 (as compared with \$101,060,000 in 1907), of which the maximum outstanding on any one date, on September 25, was \$109,185,000 (as compared with \$88,420,000 in 1907). There passed through the hands of the committee, all told, collateral

Extent of
certificates
issued.

amounting to \$462,174,000, of which 50.7 per cent was commercial paper, 35.5 per cent bonds and securities, and 13.8 per cent collateral loans. The largest volume used was in August, when those paid in on clearing-house balances amounted to .67 per cent of the total. Of all the nine other issues in the city of New York, first beginning in 1860, that of 1914 was the largest.

The power to lend freely in this emergency was also aided by another device, permitted by the Aldrich-Vreeland Act of May 30, 1908, whose expiration was postponed by the Federal Reserve Act one year, to June 30, 1915. It was the more important to lend freely because internal conditions had been sound and the crisis had been induced from

First resort
to Aldrich-
Vreeland
notes.

without by the war. As it is the function of credit to provide a suitable means of payment in times of stress in order to give time for obligations to be met, consequently generally sound internal conditions would admit of early recovery. Such a means of payment, in the form of elastic emergency issues by the national banks, was tried for the first time in this exigency of 1914. It was a makeshift necessitated by the then individualistic banking system under which no elastic note-issues could have otherwise been possible. What was really needed was an elasticity of credit and it was as a means to this end that the emergency currency performed its function. It gave the banks a means of paying "cash" without losing any of their lawful money reserves.

Under the original act national banks could issue an amount of notes equal to their unimpaired capital and surplus, provided the total did not exceed for all banks \$500,000,000. These emergency notes were to be issued on the presentation to the secretary of the treasury of (1) bonds of a State, county,

Amendments
to Act of
1908.

district, or municipality; (2) any securities, including commercial paper, offered through a national currency association, to 75 per cent of their cash value; (3) but to only 30 per cent of their capital and surplus, if on commercial paper alone. No bank could take advantage of the Act unless it already had outstanding the old bond-secured notes to the amount of 40 per cent of its capital; and its total issue, including its bond-secured notes, must not exceed 100 per cent of its unimpaired capital and surplus. A 5 per cent redemption fund was required. The notes were taxed 5 per cent per annum the first month, and an additional 1 per cent for each month, until 10 per cent was reached. Each currency association must contain at least ten banks, with an aggregate capital and surplus of not less than \$5,000,000, and each bank in it must have a surplus of not less than 20 per cent of its capital. The above provisions of the original Act requiring 40 per cent bond-secured notes, the prohibitive rate of interest, and the inability to get out of an association when once in, acted as restrictions on the scheme, and few associations were at first formed.¹ The Federal Reserve Act (December 23, 1913) reduced the tax to 3 per cent per annum for the first three months, with an additional one-half per cent for each month until 6 per cent was reached. The Act of August 4, 1914, removed the requirement of 40 per cent of bond-secured notes, raised the total issue to 125 per cent of the capital and surplus, and abolished the limit of \$500,000,000 to the total circulation. It was also given out, on August 27, by the secretary of the treasury, that paper based on warehouse receipts of cotton and tobacco, and having not over four months to run, would be available through currency associations for notes to 75 per cent of their value.

¹ For a full discussion of the Act by the author, see *Journal of Political Economy*, October, 1908.

The notes of national banks, it is to be remembered, cannot be used in the reserves of any national banks; but when paid out to the public they serve as a medium of exchange as well as any lawful money; and, moreover, they can be, and generally are, used by all banks outside the national system (which are over 17,000 in number) as reserves. This temporary device coined bank assets of commercial paper or securities into a means of payment, or money, acceptable for all general monetary uses. The tendency of timid persons, or small banks, to draw cash, hoard it, and thus cause a scarcity of money for the current needs of trade, was fully met by these emergency notes, and at the same time the lawful reserves and the lending power of the banks were protected. The reserves, however, would not have been protected if cash were taken from lawful money in the reserves to buy United States bonds, or other securities, to obtain the new notes. In reality, the issue of these notes did not increase the lending power of the banks; it only protected that power. They were not at bottom a final payment, but only a credit device in the form of money to be used in a brief emergency.

Purpose of
the
emergency
notes.

In practice the Aldrich-Vreeland notes enabled the banks to pay cash between themselves, as well as to customers demanding money. In two respects they proved to be superior to the clearing-house loan certificates: they could be used in payments between banks in different groups or in any part of the country; and banks had to pay only 3 per cent for them, as against 6 per cent for the loan certificates. Therefore, in spite of some hesitation in employing an untried device, there was a well-defined disposition to take out the emergency notes rather than the loan certificates.

Preferred to
clearing-
house loan
certificates.

In spite of various objections, currency associations had

been urged by the secretary of the treasury some time before the war, and were organized in several places mainly in response to this urging. When the war broke out the secretary used his influence against applications for notes direct from the banks to the Treasury; and in August, 1914, the comptroller of the currency again urged the banks to work through currency associations. In all, 44 associations were formed, containing 2,102 banks, having a capital and surplus of \$1,197,771,001, by 41 of whom, representing 1,190 banks, notes were taken out. By August 19 \$154,085,000 had been issued; by the end of October \$369,558,040 were actually shipped;¹ and by December 1, 1914, the total amount issued was \$381,530,000. Already the need for them was diminishing, and \$8,438,100 had been retired in October. By November 30, 1914, additional redemptions to the sum of \$120,234,419 had been made; by the end of December the outstanding issues had been reduced to about \$150,000,000; by February, 1915, retirement had been virtually completed; and by the end of the fiscal year (June 30, 1915) there remained out but \$67,640,187. Funds for the retirement of the emergency notes were first received October 22, 1914, and practically all issues were cancelled or covered by deposits by the end of the fiscal year, June 30, 1915.

In this extraordinary crisis, exceptional in many ways, under a specially urgent foreign demand on our gold reserves, with a domestic drain also at work, exports of

¹ Although, as a means of encouragement, it was announced that \$500,000,000 of the emergency currency had been printed, ready for distribution, in fact a large part of this amount was unavailable because printed under the unamended law of May 30, 1908, and had to be printed anew in the crisis. The total amount authorized to November 30, 1914, was \$383,301,305. All told, by the end of the fiscal year, June 30, 1915, \$354,140,893 had been deposited to cover retirement, or notes had been sent in for cancellation (excepting \$454,896). *Finance Report*, 1915, p. 330.

goods at a standstill, and business obligations continually falling due, it is of peculiar interest to note how the banks, aided by the issue of clearing-house loan certificates and Aldrich-Vreeland notes, were able to right the situation by loans. As compared with the striking changes in the operations of credit in European banks, those in the United States must seem mild indeed (see Chart VIII), as typified by the items of the New York Clearing-House banks. From July 25 to September 12, or only about seven weeks, the loans continued to increase. The culmination in September was followed by a slight decline, and a continuance on a uniform level somewhat above normal into the year 1915. After that we reached an adjustment to war conditions which yields no new problems and which for our present purpose may be neglected.

Duration of
the credit
crisis.

It should be recalled that under our old banking system, and quite contrary to the best European practice in times of emergency, our banks had had the bad habit of protecting themselves by drastic contraction of loans, sacrificing their customers, hoarding reserves by all possible means, and thus aggravating the situation. To lend freely in the teeth of declining reserves, as a matter of banking self-preservation, had not been the policy of banks outside of New York. To modify this wrong attitude had been the aim of the educative campaign which led to the passage of the Federal Reserve Act, in December, 1913. The results appeared in the management of the crisis of 1914. For the first time the national banks met the crucial difficulties by lending freely at the same time that the actual reserves were falling seriously. From June 27 to August 15 New York reserves had declined by \$148,000,000. (See Chart VIII.) In the one week preceding August 8

Action of the
banks at
height of
the crisis.

the loss had been \$65,000,000, and on that date the reserves had fallen below the legal limit by \$43,116,000, and they remained below that line until October 24, or eleven weeks. (See lowest line in Chart VIII.) But even then, although buying from note-brokers was curtailed, there was no drastic contraction of loans. On the contrary, by the devices already described, the banks very properly expanded their loans by \$106,700,000 between August 1 and September 12. An unparalleled situation was met with courage and good banking judgment and at no time was there a panic. The rates of discount, which usually measure the intensity of a crisis, were never at panic heights during August and September. Call-loans ran from 6 to 8 per cent, but were, of course, not literally call-loans while the exchange was closed. Commercial paper ruled at about 7 per cent, but by September at about 6 per cent. During this same period, taking the national banks as a whole, they came into the possession of miscellaneous securities (other than United States bonds) to secure circulation amounting to \$392,663,116, which enabled them to extend credit. In these eleven weeks the total national bank circulation was increased by \$195,715,596.

Although the Aldrich-Vreeland notes were a demand obligation of the bank issuing them, they required only a 5 per cent reserve in the redemption fund; but as they were paid out to the public, they would return to banks as deposits against which at that time reserves of 15 to 25 per cent had to be kept. Eventually they would move to the centres of largest trade, where they would normally be sorted and sent in for redemption. If the emergency notes were soon forced to redemption there would thus be given a test as to whether there had been any inflation or not. Whenever, in the judgment of the public, there

Situation met
by credit;
notes
secondary.

were more notes out than were needed, they would be sent in for redemption, which would furnish an automatic remedy against inflation of the currency. The banks took out the notes largely for protection, to meet demands of depositors or of money for shipment to the interior. The demands of interrupted trade and industry were not, in the main, for more currency, but for more loans at the banks. Since markets for some important goods were closed by the war, and time was required for the readjustment between producers and buyers, credit served its legitimate purpose in providing means of present payment—in notes, or deposit accounts, according to the wish of the borrower—so that solvency was maintained, industries kept active, unemployment checked, the general productive power of the country preserved, until the first squall blew over and the sails could be adjusted to the new conditions of war. In about three months the process of readjustment had begun, and the pressure for loans had begun to weaken. Recovery had set in. The slackening in the demand for credit, however, was not synchronous with the lessening demand for notes. The culminating need for loans came in September, while the volume of notes kept on increasing until the end of October, showing more or less of a separation of function between loans and notes in allaying the trials of a crisis. Credit had successfully carried the country over the unusual emergency, until the movement of goods began again. The real relief came only when merchandise again found markets. By February and March, 1915, the adjustment of credit to a war basis was well under way. There was a perceptible feeling of encouragement in our domestic trade in April and May, 1915; but after the great crops of 1915 were harvested, the country entered on a period of great industrial prosperity.

§ 4. Inasmuch as the crisis was caused by the upheaval in our foreign trade brought about by the war, a study of the trade situation will give us a better insight into the conditions of credit and bring with it an understanding of the means by which a remarkable recovery was made, to be followed by a wholly unexpected and phenomenal prosperity. As the falling off of exports first plunged us into despair, so the later increase of exports yielded us a miraculous good fortune. The whole story is told in Chart VII.

One of the drastic effects of the war appears in its influence on consumption. There was an early and general decline in the consumption of all goods except war supplies. Indeed, the war presents a most significant study in phases of changed consumption. In some, demand has been shifted without causing unemployment; or, in others, entirely stopped, entailing a readjustment of production. Almost instinctively people began to economize. Apart from its result in an increase of capital, reduced consumption also tended to reduce our imports. But obviously the decline in imports was mainly due to changed conditions within the countries from which our imports had come. Both forces were at work. In 1914-1915, as compared with the previous fiscal year, imports of articles which were not decisively necessary, such as laces, art works, silks, and precious stones, showed a decrease of \$129,000,000; while commodities whose production in beligerent countries had been interfered with by the war, such as breadstuffs, chemicals, dyestuffs, manufactures of copper, fertilizers, fibres, and hides and skins declined by \$159,900,000.¹ On the other hand, the stoppage of the

Effect of
war on
consumption
and imports.

¹ Cf. an admirable statistical study by L. C. Sorrell, "Dislocations in the Foreign Trade of the United States Resulting from the European War," *Journal of Political Economy*, January, 1916.

beet-sugar exportation from Europe stimulated the importation of cane-sugar from Cuba. Sugar, india-rubber, wool, meat, and dairy products caused an increase in imports of \$112,500,000 (of which sugar made up \$72,-300,000). The severe decline in imports of August, 1914, was followed by a slight recovery (due to orders placed before the war) in the next two months; but the December imports were the lowest in five years. The loss in 1914-1915 from six belligerents was \$259,700,000, offset by a gain of \$83,000,000 from Cuba and Argentina.¹ Including all countries, there was a net decrease of \$220,000,000. The loss from Great Britain was chiefly in textiles, tin, wool, and precious stones; from France, in art works, silks, cotton goods, and wines; from Russia, in hides and wool; from Belgium in hides, rubber, and precious stones. The greatest loss was from Germany, chiefly in colors and dyes, dressed and undressed furs, leather gloves, toys, chinaware, cotton goods, hides and skins, rubber, and tin. In view of later events, it is worth noting that imports from Germany to us recovered after August, 1914, and reached nearly normal proportions in January, 1915. By the middle of 1915, however, they had almost ceased. Looking over the course of imports as a whole before the war and then to the end of the third year, we find they rose in 1915 to about the normal level of \$150,000,000 per month; but since then they have gone up to twice that amount, reflecting some-

¹ Decrease in imports in 1914-1915 [in millions] from:

Belgium.....	\$30.8
France.....	64.3
Great Britain.....	37.3
Russia.....	18.3
Germany.....	98.6
Austria-Hungary.....	10.4

\$259.7

what the influence of exceptionally large exports. If we have sold more largely, we have bought more largely.

In turning to our exports of goods, we find the explanation of credit operations which could not otherwise be understood. Unlike imports, which show no seasonal

irregularity, exports (see Chart VIII) in past years have quite uniformly dropped to a low point in July and risen to a peak in October

and November, due undoubtedly to the seasonal character of our chief articles for export, cotton and bread-stuffs. As we have already seen, the outbreak of war immediately reduced our exports of goods. In August they fell to \$108,000,000, the lowest point in many years, producing great difficulties with the foreign exchanges and the need of gold. There could be no return to sound credit merely by shipping gold. A recovery could come only when exports of goods began to move in sufficient volume. The time when the pressure for loans began to slacken is synchronous with the increase of our exports in September and October. (See Chart VIII.) The international trade balance, which in August, 1914, was \$19,400,396 against us, turned in our favor in September by \$16,341,722, in October by \$57,305,074, in November by \$79,299,417, in December by \$131,863,077, in January, 1915, by \$145,536,103, and in February by \$173,604,366.

By December, 1914, exports had reached the normal level; after that they reversed the usual direction and began to climb to a high point in February, 1915. (See Chart VII.) In this period the whole sky in trade and credit began to brighten. As the war brought the storm in August, so it brought the clearing of the skies in November.

The early recession in exports, cut off by war, appears in the classes of agricultural implements, manufactures

Early fall
in exports.

Then rise
phenomenally.

of copper, manufactures of iron and steel, wood and its manufactures, and notably in cotton. The decline in these five groups of exports was, in 1914-1915, \$381,300,000 over the previous year, of which \$234,000,000 was due to cotton alone.

Goods not
exported as
before.

Wood and its manufactures quickly dropped to 50 per cent of normal in August, 1914; the same was true of manufactures of copper, but soon they gradually increased; breadstuffs and iron and steel groups fell off in August, but began a steady rise thereafter.

Cotton occupied a peculiar position. It was the one commodity normally in demand by Europeans to about 9,000,000 bales, and which at 10 cents a pound had an export value of \$450,000,000, thus providing to that extent bills on Europe. Moreover, we happened to have in 1914 a record-breaking crop of 16,134,930 bales. The chief market for our raw cotton had been in England, Germany, France, and Belgium. When the war broke out, it was assumed that the demand for it would be entirely cut off. In fact, the exports of cotton in August, 1914, were only 21,210 bales, valued at \$1,306,117, as against 257,168 bales, valued at \$16,518,569 in August, 1913; indeed, during 1914-1915 there was a decline, as compared with the previous year, of \$234,000,000. Assuming no foreign demand, and a home consumption of only 6,000,000 bales, there would have been a surplus from the new crop, counting the hold-over from the preceding year of 2,000,000 bales, of nearly 12,000,000 bales (500 pounds to the bale). Supposing only a partial decline in the foreign demand, it was estimated that a surplus of 4,500,000 bales would have to be carried to the future. Consequently, with the drop of exports in August, cotton fell from 10½ cents to 7½ cents per pound, or even less. When it is recalled that the

Cotton.

Southern planter is supplied with seed and materials beforehand on a credit to be paid out of the proceeds of the crop when sold,¹ and that a whole series of claims from the supply stores, the jobbers, the exporters, to the banks that have loaned on the cotton, would be made unliquid by the inability to market the crop at usual prices, it can be realized how vividly, in the face of the greatest crop ever known, ruin showed up before the cotton States. The decline of \$10 a bale in the week ending August 1 brought on the failure of three cotton brokerage houses, and on July 31 the Cotton Exchange was closed. Thereafter there were no means of determining prices, of arriving at the value of existing contracts, or of marketing cotton as usual. The cotton factor, or the spinner, was thus deprived of the means of carrying cotton for future contracts or for coming needs at prices in proper proportion to the finished goods sold. Of course New England cotton-mills, as well as the buyers of cotton goods, bought little so long as the price of cotton was unsettled. The light demand and the enormous crop together ran down the price. Then followed a sentimental buy-a-bale-of-cotton campaign, which had no effect in raising the price.

The demoralization in the cotton market was met by an interesting example of co-operation after the exchange was closed. Under contracts outstanding July 31 dealers had agreed to receive about 400,000 bales at the old prices, and faced losses of about \$6,000,000. Thereupon the exchange itself assumed the losses below 9 cents, amounting to about \$3,000,000. The Cotton Trading Corporation was formed

Relief
for Cotton
Exchange.

¹ It cost the producer of cotton, in wages and materials, about \$15 a bale (or 3 cents per pound) to pick, gin, and pack the cotton. This somewhat measures the advances made by credit. The cost of production is estimated at 9½ cents.

to take over the contracts at this price. It made payment for one-half in three-year notes, and one-half in cash provided by fifteen New York banks on paper indorsed by leading members of the exchange. The liquidation of the \$3,000,000 was insured by a tax on new business executed on the exchange, and the personal means of the indorsers. Then a syndicate was organized to buy this cotton from the trading corporation at $7\frac{1}{2}$ cents per pound. In this way the old contracts were cleared off and the losses settled. So that the Cotton Exchange was opened November 16, 1914, with cotton at $7\frac{1}{2}$ cents.

Meanwhile buyers, both for export and domestic purposes, were very cautious. Fearing the effects of such a crisis on the general business of the cotton States, it was proposed on October 24 to establish a cotton pool,¹ or fund of \$135,000,000, to be Cotton pool. loaned on cotton in warehouses on a basis of 6 cents per pound (for middling). Of this fund \$100,000,000 was

¹ For details of the plan, see Report of Secretary of Treasury, 1914, pp. 66-68:

There were two classes of subscriptions to the fund. The first, designated as Class A, to aggregate \$100,000,000, and the second, Class B, \$35,000,000, to be subscribed by banks and others in the cotton-producing States.

A bank in a cotton State wishing to make a loan to one of its customers for, say, \$10,000, would advance out of its own funds 25 per cent, or \$2,500, and receive from the cotton pool 75 per cent, or \$7,500. As security for its 25 per cent of the loan the Southern bank would receive Class B certificates, while the pool would retain Class A certificates. The lending bank, however, had to pay 3 per cent of the entire loan, or \$300, into the pool, to cover possible losses and to meet expenses.

In effect, with loans made up to 5 cents a pound, Class A certificates would be secured by cotton on a basis of $3\frac{3}{4}$ cents a pound; Class B by $1\frac{1}{4}$ cents. The two classes were equivalent to first and second mortgages on the warehoused cotton.

The loans bore 6 per cent, and ran one year, with provision of renewal for another six months on approval of the central committee in the Federal Reserve Board, charged with its management.

It was argued against the plan that it was a violation of the anti-trust laws as an agreement to sustain the price of cotton.

subscribed by non-cotton States. The loans were intended to enable producers to withdraw cotton from the market, thus limit the supply, and hold it until the emergency should pass. The last day for making applications for such loans was February 1, 1915, when only \$28,000 had been demanded. The total fund was subscribed, without enthusiasm; but the restrictions upon the banks in the cotton States that subscribed the \$35,000,000 were such that the loans would not be granted except *in extremis*. In fact, the cotton pool was not called upon to any extent, and the subscribers were never asked for any payment. It might have been very necessary; but in October exports of cotton began to move; by January, 1915, they were normal in amount; and from February they steadily exceeded the exports of other years. In January cotton sold at 9 cents, and in February at nearly 10 cents, per pound. Thus the cotton crisis ended. The pressure for loans was removed, and the exports provided bills for international payments. In the next year, however, the Allies declared cotton to be contraband, in order to cut off Germany's supply for making munitions, and there was more or less of a problem created for our diplomats; but cotton has since risen in price and our entry into the war finally quieted that excitement.

Following the example of cotton, the exports of manufactures of iron and steel fell off. But variability is a characteristic of this industry. Since January, 1914, be-

Iron and
steel.

fore the war, exports of iron and steel had been below those of previous years. There-

fore, the war only added to the depression, so that the exports of August and September had fallen 50 per cent below the figures for corresponding months in previous years. Then came a slow gain, until normal was almost reached in January; but the high export fig-

ures were not attained until June, 1915 (due mainly to metal-working machinery, firearms, and wire). In that month exports of manufactures of iron and steel led the list, exceeding even wheat and flour.

The recovery from the shock of war was aided by the increase of exports in thirteen other groups of commodities, which showed in 1914-1915 a gain over the previous year of \$809,500,000, of which breadstuffs to the amount of \$506,000,000 (wheat, wheat flour, oats, corn, barley, and rye), leather goods (sole leather, harness, saddles, boots, and shoes), meat and dairy products (canned and fresh meat and bacon), and horses furnished the largest gains. These articles began to go abroad from October to January in increasing amounts. Then, in addition, shipment began of commodities never before exported in large quantities, such as sugar, woollen goods, manufactures of brass and zinc, and explosives.

Increased
exports of
other articles.

In general, the increased exports went to Great Britain, France, and Italy, and to the neutrals, Holland, Denmark, and Scandinavia.¹ Those to France and Italy more than doubled, and those to Great Britain grew by more than a half, in 1914-1915. The extraordinary increase in exports to the neutral European countries is significant, being due, no doubt, to their inability to obtain the usual imports from the Central Powers, as well as to their desire to obtain our goods for sale to the same powers. While we were not

Countries
taking
increased
exports.

¹ France and Great Britain jointly account for 83.4 per cent of the increased exports of automobiles, 88.9 per cent of meats, 46.7 per cent of wheat. Italy alone (not yet in the war) accounts for 26.2 per cent of the increase of wheat. Wheat, cotton, and manufactures of copper, for 76.9 per cent of increased exports to Italy, and for 68.8 per cent of the decrease to Germany. Breadstuffs form 60.8 per cent of the increase to Holland. Horses, wheat, automobiles, and meat account for 60.6 per cent of the increase to France, and 38.7 to Great Britain. Sorrell, *ibid.*, pp. 56-60.

in the war, Germany obtained cotton, copper, foodstuffs, and other supplies from us in large quantities through the neutrals. After March, 1915, our exports directly to Germany practically ceased.¹

After there had come some adjustment to war conditions, it was believed that this country would gain largely in its business of supplying the demands of belligerents.

The great increase in our exports of food, cotton, and war goods, of course, justified that

belief. But our ability to export or even to supply domestic wants depended very much, in certain lines of production, upon obtaining necessary materials from Europe. We needed their dyes for textiles, manganese for steel, platinum from Russia and carbons and filaments from Germany for the electrical industries. We had depended on Germany for such drugs as citric, tartaric and carbolic acid, and camphor; oxalic acid in photography; cyanide of potassium in the reduction of gold, and potash for making glass, soap, matches, gunpowder, and fertilizers. Eventually the making of many dyes from coal-tar has become an established success in the United States.² Manganese has been supplied from England, India, and South America. Potash and cyanide, although obtained more cheaply from deposits, can be manufactured.

It might have been supposed that American merchants, when our trade with Europe was interrupted, would succeed in taking over the trade of the belligerents, especially of Germany, in South America and elsewhere, which had been lost to them on the outbreak of war. The building

¹ Cf. charts by Sorrell, *ibid.*, pp. 35-36.

² The chemical and dye question is involved with that of explosives, since coal-tar yields also benzol, toluol, naphthol, anthracene, carbazol, and other ingredients.

up of trade with South America, however, has been, in fact, slow and difficult. These countries, being young, are as yet mainly engaged in developing their natural resources for which they lack capital. Previously they had obtained English and German capital. It is estimated that the English who came first have invested some \$5,000,000,000 in South America. The European War cut off these supplies and the business of these borrowers was paralyzed. Not able to maintain production on the old scale, their purchasing power was correspondingly reduced. If the United States were to acquire their trade it must not only provide the expected capital, but it must also be willing to lend it on the terms customary in South America. Since the funds would be needed to sustain operations in agriculture and in turning out war materials, in which the period between the inception and the completion of production is long, credits were demanded on terms to continue until goods could be sold. Such loans, therefore, were not of the sort to be taken by strictly commercial banks. This was patent, especially to our banks in the Federal Reserve system, the first aim of which was to encourage and accept only short-term commercial paper. German banks, organized for foreign business and to finance new enterprises, were not confined to commercial banking. They accepted long-term credits, took risks, and expanded their operations in a way not customary to banking in this country. Not only were overdrafts common; but in South America, real-estate security was regarded as a satisfactory bank asset.

Character-
istics of
South
American
trade.

When the war came, South American money markets were hard hit. If the springs of credit are shut off, the main current of trade is dried up. Could we make a connection between their needs and our reservoirs of cap-

ital? The answer was not an easy one. We had been, in the past, buying more from South America than she took from us. In August, 1914, our exports to the southern continent fell to one-third of the same month in 1913. In October our exports to Argentina and Brazil had fallen in the same proportion. The latter country had been overexpanded before the war, brought to a halt in 1913, and plunged into a banking crisis in the early part of 1914. A bad situation was so aggravated by the war that she was led to pass a general moratorium and to issue such large amounts of government paper money that it depreciated 25 per cent. Obviously, countries in such a condition could not be expected to respond to our advances for a larger trade with them. There was an increase in the risks of lending to South America, not only because the local monetary conditions made the quality of the means of payment uncertain, but because the resort to moratoria rendered obligations unliquid for a considerable period. Inasmuch as they had depended mainly on customs duties to support their governments, the cessation of trade reduced their income, made it difficult to pay interest on national debts, and led to unfortunate issues of paper money. It was no wonder, then, that expectations of an increasing trade with South America early in the war were disappointed.

The continuance of the war, however, and the extraordinary growth of capital in the United States practically forced us into closer relations of trade and credit. There was no other resort for South America but to our supplies of capital. Furthermore, we needed her wool, hides, nitrate of soda, and her copper; and she began to take from us in increasing quantities automobiles, coal, cotton goods, implements, and tin-plate. Gradually and

War caused
difficulties in
our trade
with South
America.

inevitably our trade developed in the following fiscal years:

	Imports into United States	Exports from United States
1914.....	222.6	124.5
1915.....	261.5	99.3
1916.....	391.5	180.1
1917.....	542.2	259.6

The importance of the increase in this trade resides in the fact that the goods exchanged are not munitions of war, and are, therefore, more likely to be traded in after peace comes. The trade, however, still remains somewhat one-sided. We are not able to pay for our imports by exports of goods. On the merchandise account in these years we owed South America \$754,000,000. By selling her raw products to us she is able to meet obligations falling due in Europe, since we can use our large balance in Europe to pay European creditors of South America. The adjustments of this trade, moreover, have given rise to interesting problems in foreign exchange, and to an ambitious hope for "dollar exchange." The total trade of South America is large, and the business in bills drawn on the movement of wool and staple goods to the various—even though changed—markets of the world is important and eagerly competed for. Discounting of such bills is a part of legitimate commercial banking on short-term paper.

The wide-spread effects of the prodigious upheaval in our foreign trade have upset all calculations regarding credit, the foreign exchanges, and the balance of trade. It will be noticed that, at the outbreak of war, imports continued to fall even after exports began to climb. (See Chart VII.) Europe had been taking from us chiefly food-

stuffs and raw materials, and had been sending us mainly manufactured articles. Our exports were of a sort which were necessities to the belligerents, while most of our imports could be dispensed with in an emergency. For this reason our imports declined while our exports rose. But later our imports rose to an unprecedented level, evidently related in some distant way to the exceptionally large exports. The increase in the imports in 1916-1917 was due to the buying for the most part of raw materials entering into the production of our exports, such as gums, crude chemicals, copper-ore, cotton, jute, manila, sisal, and other fibres, hides and skins, rubber, raw silk, and wool. Doubtless for a time Europe bought from us less raw materials, but more of foodstuffs and finished products, because of the scarcity of her labor force. The exports by us of finished manufactured goods (which included munitions) was nearly a billion dollars greater in 1917 than in 1916, and manufactures for further use half a billion greater. These commodities show a greater increase than foodstuffs; although the latter rose in amount earlier than the former. The demand for munitions continued in force and outstripped foodstuffs. In 1914 cotton exports led; in 1915 breadstuffs; in 1916 and 1917 manufactures of iron and steel.¹

¹ The groups showing a great increase of exports in the first three fiscal years of the war are as follows (in millions of dollars):

	1915	1916	1917
Breadstuffs.....	573	435	589
Cotton (raw).....	376	374	543
Iron and steel and manufactures.	225	621	1,129
Copper and manufactures.....	99	173	322
Leather and manufactures.....	120	146	153
Meat.....	220	290	404
Explosives.....	41	467	802

In these groups there would be the greatest readjustments when peace comes.

In order to study the bearing of the modifications in our foreign merchandise trade upon the foreign exchanges¹ and credit we may sum up the general results of the balance of trade in fiscal years as follows (in millions of dollars):

Year	Exports	Imports	Excess of Exports
1913.....	2,465	1,813	652
1914.....	2,364	1,894	470
1915.....	2,768	1,674	1,094
1916.....	4,334	2,193	2,136
1917.....	6,293	2,659	3,634
Totals for 1915-1917.....	13,395	6,531	6,864

In these last three years the excess of our exports was itself larger than all our imports; the balance in our favor was more than ten times as great as in a normal year like 1913; in fact, more than all our securities held abroad; or more than twice as large as the debt incurred in our Civil War. It is a remarkable display of economic power in contrast to the alarm and depression of 1914; and a basis for estimating our capacity for service in entering the war against Germany.

§ 5. The studies already made have prepared us to take up some of the influences which have produced the remarkable and unexpected oscillations in our foreign exchanges. Never in our history have they showed the operations of credit on such a scale, or in such surprising contrasts. These amazing jumps from high to low quotations in the international medium of credit could not be explained without a full understanding of the movements of goods, of securities, and of gold to and from the United States. We have found goods to be the main basis and ex-

¹ Cf. *infra*, pp. 336, 341.

plication of credit; and we have given due attention to the extraordinary upheaval in the movement of goods. Next to goods, however, securities have the most importance among the items making up the international account.

We have already referred to the large amount of our securities which were held in Europe before the war. After subtracting those returned to us since the Balkan

Wars, it seems that European holdings in 1914 must have been somewhat less than \$6,000,-000,000. In July there was heavy selling here; but this was held up by the closing of the stock exchange (July 31) to prevent ruinous liquidation when other means of international payment were in abeyance. Obviously, the opening of the exchange had to wait on the movement of goods and the readjustment of the market for foreign bills. In the period of suspension of stock transactions outside dealings could not be entirely prevented; but loans on collateral could be carried at the quotations of July 30 by the banks so long as no lower quotations regarded as those of an official market were published. Of contracts outstanding in New York on July 31 about \$100,000,000 were settled by mutual consent in the seven weeks to September 22, and this load was taken from the market. Pressure for some further means of selling and buying was strong.¹ On August 12 members were permitted to buy listed stocks for cash at prices not below the closing prices of July 30 through a committee of the exchange, and could also sell on the same restrictions of price if shown to be necessary to relieve themselves or their customers. On September 9 listed bonds could be disposed of under supervision at minimum

Checks on
sale of
securities.

¹ The curb market in New Street had begun operations by August 11, and some stocks, like United States Steel, Common, fell from 10 to 13 points below the minimum quotations of July 30.

prices. By the end of September means had been devised for restricted dealings in listed stocks and listed and unlisted bonds. Finally, the intention of the curb to open led the stock exchange to arrange for dealings in unlisted stocks through a mixed committee. In November, as we have seen, the high pressure for loans had passed, exports were gaining, and some recovery was at hand. On November 13 unrestricted trading in listed municipal and state bonds for domestic account was established; November 16 the curb market opened; November 28, in a period of rising prices, dealings were allowed on the floor of the stock exchange in listed bonds for cash at prices not below those authorized by the committee from time to time. The generally improved situation and a feeling of confidence brought higher prices, and this re-opening step was a success. On December 12 further action was taken by authorizing dealings in a designated list of 182 stocks at fixed minimum prices, which were two or three points below the quotations of July 30. A rising market and great activity through the committee in stocks not on the designated list finally led to the full reopening of the exchange for all securities on December 15, 1914, after a period of suspension for four and a half months. It was not until April 1, 1915, however, that the lists of minimum prices were finally abolished. Thus the market for securities was finally brought to life again by the fundamental movement of goods which underlies all credit operations.

Opening of
stock
exchange.

After the opening of the exchanges very large amounts of securities were absorbed by us. As regards railway securities alone (which in past years formed the main attraction to foreign investors), on January 31, 1915, \$2,704,402,364 (par value) were held abroad, of which about \$1,518,590,878 (with a market

Total sales
of returned
securities.

value of probably \$1,200,000,000) had been returned to this country by January 31, 1917.¹ This figure, of course, does not include sales before January 31, 1915, nor those since January 31, 1917. Then, if we add the return of securities other than those of railways, such as industrials, State and municipal bonds, it is fairly within the mark to estimate the total volume of our securities returned to us in the first three years of war at not less than \$2,200,000,000.² The remainder of foreign holdings are largely impounded in the hands of governments as a basis for loans placed in our markets. While there now seems to be no more fear of an exceptional avalanche of selling by foreign holders of our securities, there have been recently sales of collateral behind British loans here.

Having arrived at the approximate amount of securities entering into the international account, and also having definite figures for the loans made to Europe both by our government and by private institutions of credit, we are now in a position to take up, finally, the story of the foreign exchanges and the movement of gold. In this process we are able to obtain the various items which offset our \$6,800,000,000 of surplus exports of merchandise and thus balance the international account between us and other nations. Credit among the nations, as well as credit operations within each nation, are written large in the records of this unexampled war.

§ 6. An international medium of credit which also saves the passage of gold is of importance in so far as it aids in an inexpensive and effective exchange of goods. In our domestic trade this end is served by checks drawn on deposit accounts, that is, the deposit-currency. In

¹ Cf. report made by President L. F. Loree of the Delaware and Hudson Company, based on information furnished by 144 railroads over 100 miles in length.

² Cf. also *Third Annual Report of Federal Reserve Board*, p. 1.

international trade this service is rendered by bills of exchange. A bill of exchange is an order on a foreign debtor to pay a certain sum (usually the proceeds of exports) to another person as designated in the bill. Thus A, having sold wheat, or cotton, to B in London, may wish the cash at once, and sells his claim on B to C, in New York or elsewhere. Then C, owing D, in London, uses the bill he has bought on B to pay D. In this simple way two shipments of gold are obviated by bills. Only as a last resort is gold actually shipped to cover a difference arising from offsetting all the various items in the international account. At any one time the open account may not balance, but as an excess of debts may be followed soon by an excess of credits, the account is kept going by offsetting claims through bills of exchange up to a certain point, until the price of bills goes up or down enough to warrant the expense of shipping gold. If our exports are large, many bills on Europe are offered, and they go down in price; but normally they would not be sold below the rate which would cover the cost of sending gold. Between us and London par for a pound sterling is \$4.86½, and the shipping-point about 3¼ cents above or below, which includes commissions, insurance, and interest for the time the gold is on the water. The shipping-point, therefore, may vary, especially because of dangers on the sea, or of changes in the rates of interest.¹ When bills rise or fall because of normal fluctuations in the movement of merchandise,

Bills of
exchange
explained.

Shipping-
points.

¹ The par in New York for foreign moneys is as follows:

London.....	\$4.8650
Paris (francs equal to \$1).....	5.1826
Berlin (cents for 4 marks).....	0.9525
Russia (for 1 rouble).....	0.5146
Italy (lire equal to \$1).....	5.1826
Holland (florin).....	0.4020
Scandinavia (crown), Norway, Sweden, Denmark.....	0.2680
Austria-Hungary (crown).....	0.2026

securities, etc., they are hemmed in above and below by definite shipping-points for gold. If gold actually moves, quotations for bills cannot go beyond these points. In other words, the sending of gold acts as does redemption for a domestic circulation; it prevents depreciation. If shipping-points disappear, bills, like inconvertible currency, may go to any figure of depreciation.

It was long ago conceded that London had become the recognized credit centre of the world. All over the globe bills drawn on London were an accepted means of payment. There was enough English capital engaged in banking to aid in moving all the goods traded in through London from every foreign country. If one of our banks, for instance, had loaned because of exports of breadstuffs on exchange for ninety days, accompanied by bills of lading, it forwarded the bill of exchange drawn by the shipper, and indorsed by it, to London for acceptance and discount. The bank (or the exporter) now had a credit in its favor in London. It could at once release its capital by drawing a demand bill on this credit, and selling it in this country to an importer. The bank's (or the exporter's) capital is thus freed for additional transactions here, while the task of waiting until the bill matures is assumed by the London bank. In that way we obtained the aid of English capital on short-term bills in moving our crops or manufactured goods to foreign markets. Practically every other country engaged in international trade had the same relations with London. These operations were carried through by the use of bills of exchange. The foreign exchanges, therefore, are interesting, not so much for a knowledge of the mechanism itself as for the way they disclose the workings of important forces,¹ whose results are registered in the quotations of bills. The nature of

London the
centre of
international
credit.

¹ For a list of them, see p. 125.

those forces in this country we have just been studying; and we now proceed to a consideration of the effects of the war on exchange.

Owing to the marked falling off of our merchandise exports in the spring of 1914 (imports actually exceeding exports, see Chart VII) and to the return of our securities from Europe, there was the final resort to the shipment of gold (see Chart VI), amounting to \$89,500,000 in May, June, and July; for bills were in demand and stood at the upper shipping-point of about \$4.8820 in New York.¹ By the end of June bills began to decline, because of our borrowing in Europe in anticipation of the coming heavy exports of the autumn due to the large crops of wheat and cotton. This borrowing was carried on through the drawing by bankers of time bills (or, as not being based on the exports of goods, "finance bills") on European lenders, thus obtaining credits abroad. The buyers of these bills sold them at once, believing that exchange would fall in the autumn. That is, such a creation of foreign credits is one of the offsets in the international account. But, irrespective of the return of our securities, there was the normal large balance already due by us to Europe for imports of goods, expenditures of American travellers abroad, and the recent placing of our securities there. If conditions had remained normal, this large balance against us would have been met soon by bills sold on the coming exports of breadstuffs, and cotton, in the autumn months. In fact, dealers in exchange, not foreseeing war, no doubt sold bills short in anticipation of the great crops. Such was the situation of the foreign exchanges at the outbreak of the European War.

Exchange
situation
just before
the war.

International money markets are exceedingly sensitive

¹ In his article on the crisis of 1914, already referred to, Professor Sprague has given an extended discussion of the foreign exchanges.

to coming danger, and after the violent break on the Vienna Bourse, July 20, European discount rates advanced, foreign exchange in New York rose to \$4.8830; and on July 23 exports of gold were resumed. A rise in exchange meant that our European creditors were trying to strengthen their position by calling for gold. The continual selling of our securities here began to tell in the demand for bills on Europe. If exports of our goods could be counted on, the storm might blow over. But the bottom underneath international credit suddenly dropped out when the war stopped the movement not only of goods but even of gold. There has probably never been known such a collapse in the foreign exchanges as that which then ensued. It was not so much that the mechanism failed, but that the forces whose workings are registered in foreign bills were in dire and unexpected confusion.

We have previously related¹ the extraordinary events which brought the acceptance and discount houses of London to the verge of ruin. A time-honored reliance was suddenly withdrawn from us. Our banks had indorsed bills accepted in London, and if the acceptors failed, the indorsers would be liable. Even if the acceptors did not fail, readjustment must take time. Therefore, when London could not render account of acceptances based on shipments of goods previously made, American capital was locked up; and if no new bills could be discounted in London, it meant that the exporting country must itself carry the loans through to maturity, without the aid of foreign credit.² This is how the shoe pinched us, when the London credit system was

New York
exchange in
confusion.

London
exchange
chaotic.

¹ *Supra*, Chapter III, §§ 3, 4.

² Both spot (rates on bills already in London) and forward delivery (rates on bills to arrive by next mail) quotations were discontinued on Monday, July 27. Cf. Sprague, *loc. cit.*, p. 506.

disarranged. The buying and selling of exchange became a matter of uncertainty, or even of chaos. From July 27 London practically ceased discounting foreign bills. As a consequence we heard much of the loss of English pre-eminence in the world of credit. Of course no market can remain the centre of credit which is unable to discount and carry to maturity time bills based on staple goods; because the drawers get no aid if they cannot realize on bills at once. It does not follow, however, that English capital engaged in banking has been so far destroyed by the failure of debtors in enemy and other countries to meet their obligations to London that it will not be sufficient in the future to resume its services to foreign drawers of bills. The cataclysm may be only a measure of the intensity of the temporary shock, and not an evidence of permanent decline. Likewise, New York cannot assume London's place simply because it is outside the region of actual destruction by war. Any other city can take away London's pre-eminence only if it can surpass London in the capital at its disposal for accepting and discounting bills from all parts of the world. As yet we have not seemingly the surplus capital, the experience, the information concerning local conditions and standing of merchants in foreign countries, nor the machinery, to meet the emergency. Much, however, is being done to improve our position.

New York
and London's
supremacy.

The storm broke in our foreign-exchange market on July 27, 1914. Time bills based on shipment of goods could not be turned into cash here by the sale of demand bills on London. If our bankers had balances abroad bills could, of course, be drawn on them; but, as before explained, we were in the normal state of indebtedness, looking forward to exports

High price
for sterling
exchange.

to give us sufficient means of payment. To save their standing those in urgent need of making payments in Europe bid high for exchange. Demand exchange was quoted at \$4.92, far above the customary shipping-point. Such high rates offered a premium on exports of gold. On July 27 and 28, \$19,000,000 were sent out, and by August 1 an additional \$17,000,000 was engaged for export. These sums aided the market for exchange but slightly, since the heavy sales of our securities (as described in the preceding section) during this same week had created a new and abnormal demand for foreign exchange. Exchange rose to \$6.50, and even in some instances to \$7.00 for £1.

Then intervened an extraordinary situation. We were on the gold basis. If we owed others and had the gold, why was exchange selling at a price regardless of the shipping-point? It was clear that all the offsets

Shipment
of gold
impossible.

for an adverse balance of trade had been exhausted, except the shipment of gold. Unlike France and Germany, the United States had no reason for abandoning gold payments. Suddenly it was realized, on the declaration of war, that it was physically impossible to move gold by sea. The incident of the *Kronprinzessin Cecilie*, which, carrying gold for London, was obliged on August 4 to turn back, actually caused our banks, although with the needed gold embarked, to default on their payments due in London. It was as if a man with the money in his hands to prevent the foreclosing of a mortgage, was forcibly restrained from reaching the door of his creditor. It was a precarious position. Seemingly we could not pay our debts.

Other consequences followed. The impossibility of sending gold through usual channels to Europe, because neither ships nor insurance could be had, played havoc with the funds of Americans happening to be travelling

abroad when the war came on. Bills drawn on letters of credit from American banks early in August were not cashable except at a great discount. For great numbers of travellers the only relief came from an appropriation by Congress of \$2,750,000 in gold to be sent by our government in the war-ship *Tennessee* to the various embassies in Europe. For a time, therefore, the effect was the same as if we had suspended specie payments.

Predicament
of American
travellers in
Europe.

For about two weeks, until England's fleet had provided a fairly safe passage across the Atlantic, neither goods nor gold could be transmitted. Hence, exchange could not be drawn when the very basis for it had ceased to exist. The first step, however, was taken in removing the obstacles to the shipment of gold when the Bank of England established branches in Canada (Ottawa), South Africa, and Australia, in which deposits of gold counted as reserves of the Bank and thus could cover English credits. Since our main intercourse in trade and credit, after the beginning of the war, was with London and Paris, the possibility of sending gold by land to the branch Bank of England at Ottawa, on August 12, removed all risks in its shipment by sea. Means for restoring the normal machinery of foreign exchange had thus begun. Selling of securities had been stopped. Really essential recovery could come only with the exports of goods in substantial amounts; and yet we have seen (Chart VII) that imports exceeded exports until October. Consequently, restoration of fairly normal conditions in the exchange market could not be expected earlier than that month.

Branch of
Bank of
England at
Ottawa.]

Meanwhile, pressure was put upon us to meet our foreign obligations in gold. The city of New York had used its tax warrants to obtain funds in anticipation of

collections as a basis for loans in London and Paris, totalling \$80,243,940.47, because it could borrow there at lower rates than here. These loans began to fall due in September, the last instalment maturing in December, 1914. To maintain the credit of the city the New York banks agreed to become responsible for their payment in gold or sterling exchange as these loans matured. This agreement was regarded in the exchange market as a reason for a strong demand and high prices for exchange. Meanwhile the rate had dropped to about \$5, while the shipping-point to Ottawa was \$4.91. There was thus still a considerable profit in sending gold.

The actual outcome of these exchange operations is instructive. To meet this foreign debt the subscribing New York banks actually sent in the following means of payment:

Gold.....	\$35,264,637.55
Foreign exchange.....	10,121,563.00
Checks on New York banks.....	34,857,739.92
	<hr/>
	\$80,243,940.47

That is, by reason of credit operations, even in this time of intense demand for gold, only 44 per cent of the foreign debt was actually paid in gold by shipment to Ottawa. The foreign exchange turned in was purchased on London by those banks who preferred to buy exchange at a premium rather than give up gold from their own vaults. The remainder, consisting of New York funds, was skillfully used in buying exchange. As November drew on it will be remembered that exports of goods began to mount up, mainly on account of European purchases here of war supplies. Thus bills came forward in large amounts, and when, on November 12, the managers an-

nounced that they already had exchange in hand to cover their needs, the prices fell below the point of export, and even touched $\$4.86\frac{3}{4}$, the lowest quotation since the outbreak of war. Those who had been holding exchange for a high price suffered.¹ The foreign creditors were also offered by the city short-term bills bearing 6 per cent in lieu of repayment, but the approximate amount of the new notes taken in London and Paris was only \$2,000,000.

This successful outcome was due not only to the increase of exports, but also to the operations of the Gold Pool, which was trying to provide gold for those in all parts of the country who had to meet obligations in Europe maturing before January 1, 1915. Concerted action in collecting gold would obviously work to lower the rates for exchange. In the fixing of all prices there is a psychological element; and if it were known that gold was available, little would be called for. Holders of exchange would take less. The pools for providing gold thus served the necessary function of steadying exchange during a time of extreme confusion until exports of goods could again move. Payment for our imports and for the securities returned before the stock exchange closed was urgent. In all about \$450,000,000 would be needed by January 1, 1915. A conference was called August 14 in Washington, at which measures were proposed to liberalize our shipping laws and create a bureau of war insurance to stimulate the transportation of exports. This was followed by a conference of bankers, on September 4, 1914, under the aus-

The Gold
Pool.

¹ While the banks were responsible for providing gold to the whole amount of the loan, they agreed to furnish sterling exchange at \$5.035, and Paris bills at \$1 for each five francs, the rates prevailing at the time of the contract; but they also agreed, if exchange could be bought at lower rates, to pay the city all profits over 2 per cent. It was reported that the city received, under this arrangement, about \$450,000.

pices of the Federal Reserve Board, which proposed the formation of a gold fund, finally fixed at \$100,000,000, to be subscribed by banks in all reserve and central reserve cities, of which 25 per cent was in fact called for payment on October 13, 1914. On September 30, however, in anticipation of getting the pool into operation nine leading New York banks advanced \$10,004,221.76 in gold, which was immediately sent to Ottawa under an arrangement with the Bank of England for a corresponding credit in London. The Gold Pool could now supply demands for exchange, which were granted at rates fixed by the committee¹ in charge. Payments for exchange must be made in certified checks on New York banks. Subscriptions to the fund amounting to \$108,929,360 came from

Little gold
actually sent.

all parts of the country, but New York City supplied \$45,000,000. In its practical workings it is again worth noting that the actual shipments of gold were small, no gold, in fact, having been sent to Ottawa beyond the sum advanced before the pool got into operation. Individual banks, however, for their own account shipped abroad additional gold, amounting to at least \$66,000,000 by December, 1914. The total amount of drafts and cables called for and finally completed by the pool was \$10,056,307, and in October, it will be recalled, exchange began to decline. In the early opera-

¹ The actual management was intrusted to a committee of five bankers in New York City where the market for exchange centres. This New York committee had authority "to call upon the contributors for gold or gold certificates from time to time in instalments as required (provided that the contributors shall not be called upon to pay any portion of an instalment which may make their investment in the fund at any one time exceed 25 per cent of their original contribution), to arrange for shipments of gold to other countries, to sell exchange and cable transfers against such shipments at such prices as they may fix, to determine to whom and under what conditions foreign exchange may be sold, to distribute the proceeds of such sales among the contributing banks in New York funds, and to fix a date for the termination and final settlement of the fund."

tions of the pool bills were high and the profits on the exchange sold were large. As fast as exchange was sold, repayments were made to subscribers in current funds, who had thus in effect swapped some of their gold for New York funds. On the call for the first 25 per cent, \$27,232,340 was paid in; but by October 28, 10 per cent was returned to subscribers. A second repayment of 10 per cent was made November 17, and a third on December 7. Thus a comparatively small shipment of gold served to meet a seemingly portentous demand for foreign exchange.¹ It will be remembered, however, that, although our banks sent to Ottawa over \$75,000,000 in gold, the inauguration of the Federal Reserve system on November 16, 1914, lowered the legal reserves by some \$300,000,000. Hence the shipment of gold at this time was not regarded as serious in its effect on reserves.

The chronology of the New York City pool, the Gold Pool, the decline of high quotations of exchange, the cessation of the pressure for loans, jumps with the time when goods began to move to Europe. In the long run it is goods that must pay for our imports and all foreign demands. All the items in the international account work for an equilibrium; but gold itself, as has been frequently said, is sent last and only as a means of paying balances.² Bills of exchange act as a device for preventing the shipment of gold until the last necessity. Only as much gold is

Demand for
gold abated
when goods
were
exported.

¹ The total expenses of the Gold Pool were \$16,542.67, and all balances due subscribers were repaid in February, 1915.

² A fact so obvious as this disposes of the archaic theory that it is the shipment of gold which works as a causal first force, bringing about high prices (by virtue of the quantity theory), and thus stimulating imports into the country to which the gold is sent. The true order of events is just the reverse: goods or securities move first, for reasons independent of the circulation, bills of exchange keep the account open, and gold is sent only as a last resort. In such operations changes of price, if any, have preceded the shipment of gold.

needed as will serve to test the solvency of credit operations, and to redeem international obligations in the only money accepted as an acquittal of debt between nations. Just as, when domestic paper money is convertible on demand, no one has an object in presenting it for gold, so in international dealings, when it is known that gold can be had, it is not wanted. In brief, the gold reserves on which for the moment our credits rested were protected from the unprecedented foreign demand, and yet our pressing debts in Europe were successfully paid off. The storm had abated.

The collection of gold funds to send abroad was accomplished in the teeth of a tendency of our banks to hoard gold in a time of emergency. Contrary to well-established

European practice, the soundness of a bank had come to be measured in this country rather by the amount of its cash reserves than by the quality of its loans. The whole func-

Result gained
in spite of
tendency to
hoard.

tion of reserves to supply cash when called for in a crisis was seemingly disregarded. Our highly individualistic banking system had been disunited and without the possibility of concerted action. Each for himself was the rule when a drain on gold came. For some to give up gold when others were hoarding it played into the hands of the selfish and the foolish banks. The purpose behind the passage of the Federal Reserve Act was to remove the emphasis on cash reserves and transfer it to short-time paper suitable for rediscount, the proceeds of which would at once increase reserves. In fact, there was no scarcity of gold. In October the gold holdings of the Treasury in round numbers were \$1,000,000,000, and of the banks and trust companies, \$600,000,000, sufficient for all needs if properly managed. Since the Federal Reserve Banks were not yet in operation at this time, the voluntary organization of pools was needed

to secure trusted leadership and unity of action. Thus the joint effort to meet our international obligations in gold protected the credit of our entire banking system and worked an advantage for all members of it. Only by courage and resolution in times of stress can a reputation for stability and good faith be built up among nations.

Out of the time of a startling upheaval of trade and credit came a period of comparative calm with opportunity for a readjustment to new conditions. Then later followed a dramatic reversal of all that had been so alarming in regard to gold, trade, and credit. Of the many remarkable events in the most remarkable of all wars, nothing was so unexpected or so epoch-making as the turn in the tide of our exports (see Chart VII), and the consequent revolution in the prices of exchange. The tide began to creep in by October, 1914, when first the exports, especially of foodstuffs, cotton, and munitions, began to exceed our imports. By November and December the rising flood had floated many an enterprise off the rocks. Foreign markets tugged at the tow-ropes of our exportable products. As an expression of the new situation, bills began to fall to a point which warranted the importation of gold.

Turn of the tide in October, 1914.

The key to the whole situation, let it be repeated, lay in the unexpected and unprecedented increase of our exports. (See Chart VII.) In comparison, every other item in the international account is insignificant.

It is this prodigious excess of exports of goods which has created latterly the extraordinary problems in credit, exchange, and gold which exact a wise solution. By way of recapitulation we may again state the items by which the international account must be balanced sooner or later.¹

Dynamic forces in international accounting.

¹ Cf. p. 125.

<i>Cr.</i>	<i>Dr.</i>
Exports of goods.	Imports of goods.
Funds of returning emigrants.	Expenditure of American travellers in Europe.
	Freight and insurance on imports.
	Returns due to foreigners on their holdings of our securities.
	Remittances to friends in Europe.

These are the normal items in a static condition of trade. The dynamic forces enter in disturbances of exports and imports, the return of securities, the cessation of travel and remittances, thus necessitating a rebalancing of the account by obtaining new credits in other countries having a favorable excess of exports, and even by a large movement of gold when it cannot be prevented by a change in the other items. It is the dynamic boiling in the international pot which has created the problems in exchange and gold.

In the first three years of the war the upheaval caused by the excess of exports¹ had created a credit abroad in favor of the United States of \$6,864,700,000. How were we paid? Certainly not all in gold. The settlement was in fact carried through by credit operations, together with shipments of gold amounting to about only 16 per cent of the whole balance in our favor.

As to the changes in the other items, the remittances to friends in Europe had fallen off by 1915. They have been estimated in the past at \$250,000,000 a year, the foreign postal orders alone running about \$100,000,000. But the sums sent for aid to Belgium and other countries have much more than offset any decline. The funds carried away by returning emigrants since the war must be very small. The expenditure of American travellers in Europe, which has

Shifting of
customary
items.

¹ Cf. *supra*, p. 319.

been estimated at from \$50,000,000 to \$200,000,000 a year, has ceased. For freight and insurance on the ocean we are paying not less than \$25,000,000 a year. On the assumption that foreigners held about \$6,000,000,000 of our investments, and that over \$2,000,000,000 have been returned to us, we still owe on the dividend item probably \$200,000,000 per annum.

The story of the means by which this prodigious credit in our favor was settled has exceptional interest and furnishes many lessons for the future. Since no one could see far ahead in a time of war, it is not strange that the pangs of readjustment were disconcerting. But by November, 1914, even before the Federal Reserve Banks opened (November 16), the period of recovery had set in, exports were going out, exchange was falling, the stock exchange had partially reopened. By December exports of gold had practically ceased. With the beginning of 1915 until the following autumn there ensued the period of adjustment to the new war conditions. By November, 1915, heavy gains in our trade were generally acknowledged. During this period are found the most interesting developments affecting gold and the international account.

Period of
readjustment
in 1915.

By February, 1915, exports rose to a new height, and by September of the same year they had started on a momentous climb never before dreamed of. (See Chart VII.) Of course exchange on London and Paris went to new low points; imports of gold began in February and continued to a record-breaking ascent in October. (See Chart VI.) The shipment of gold, large as it was, had little effect on the prices of exchange. Bills were in far too great a supply. Then was made clear the real issue. It was obvious that the balance in our favor could not possibly be met by

Unprecedented
excess of
exports and
low exchange.

gold. Moreover, England and France could not spare so much gold, and we did not need it. The war, with the vast purchases in the United States, had produced a situation quite out of the ordinary, one which could be met only by extraordinary devices.

It is to be noted that, normally, the rate of interest in New York would have affected the movement of gold to this country.¹ If our interest rates were low, capital would not have moved here. To January, 1915, the rates on call-loans in New York fell to 2½ per cent, just when foreign exchange indicated coming imports of gold. The low price of exchange, however, was not a bid for capital. It was not a normal situation. In fact, it was necessary to get munitions from us at any cost, even that increased by the fall in exchange. Prices of exports thus rose before gold came. Exports had to go, and the means of payment was left to be worked out somehow in the future.

Everything, therefore, pointed to the necessity of finding some other offsets to our credits than the usual resort, in ordinary emergencies, of sending gold to us. As early as April, 1915, the relation between the low rate of exchange and credits to foreigners became plain. The low exchange rate merely registered the extent of foreign purchases here; hence the problem was one of granting credits. A first and obvious offset was the return of our securities held in Europe, of which we have previously spoken (§ 5). Beginning with January, 1915, the sales have continued into 1917, and afforded an offset against our credits, as already estimated, of about \$2,200,000,000.

The possibility of obtaining loans in this country to be expended for purchases here was raised early in the war by

¹ Cf. Laughlin, *Principles of Money*, chap. X, "Prices and the International Movement of Specie," § 8.

France and Russia. Through its banking agents England had been financing purchases for herself and others on a large scale in the United States. Very considerable amounts were thus borrowed here from private credit institutions and banks. This process worked out quite slowly. American investors had not been familiar with the securities of many foreign countries freely dealt in on European markets. There was hesitation in taking the direct obligations of important belligerent governments on the ground that the enormous war expenditures would soon result in financial exhaustion. In August of 1915 serious attempts were made to support English exchange by sending here some \$50,000,000 of gold and as much more of our securities. In spite of this and other shipments of gold, exchange continued to fall. They were only palliatives. Sterling exchange dropped to 4.55½. So serious and expensive was this rate for English buyers that new efforts had to be made to remedy the situation. The rapidly increasing exports could not be overtaken, even by the exceptional imports of gold up to October. Very early in September bills on London actually touched the incredibly low point of \$4.49, showing a depreciation of over 7 per cent. So critical was the case that an English and French commission arrived here to negotiate a government loan.¹ The Anglo-French five-year 5 per cent external loan for \$500,000,000 was negotiated with some difficulty, our bankers asking for a collateral loan, while this was a direct obligation of the English

Credits in
this country.

Anglo-French
loan.

¹ Not much importance need be given to the plea that Americans must grant credit to English purchasers of munitions, or they would buy elsewhere. Apart from Canada, there was no other source of such supplies. War demands were imperative and exports went on at any obtainable price. The high prices of munitions had nothing to do with the quantity of money in circulation, nor was credit easy to get.

Government. In response to this loan, exchange rose to \$4.72, but soon dropped again to \$4.62. For a time early in 1916 gold was not largely imported. In that year there began to be placed here a series of loans by English, French (both government and municipalities), Russian, Italian, Canadian, and other governments. Apart from many private loans, these offerings in our markets were taken by January, 1917 (excluding Canadian borrowings), to the sum of \$1,570,000,000.

The case, however, needed even more drastic treatment. When this country entered the struggle (April 6, 1917) loans were soon made directly by the American Government to the Allies to cover the still increasing volume of purchases here. To September 25, 1917, under the Act of April 24, 1917, these loans actually made amounted to \$2,149,000,000, while credits had been agreed upon¹ for \$2,426,400,000.

We are now able to see how, in actual practice, the international account which for the first three years of the war² showed a credit in our favor of \$6,864,700,000 was balanced, and how much gold was imported in this settlement. From August 1, 1914, to August 17, 1917, the excess of imports over exports of gold was \$1,111,958,000,³ or more than the whole stock in the Treasury before the war.

The total result for the three years may be expressed

¹ Great Britain.....	\$1,190,000,000
France.....	650,000,000
Italy.....	255,000,000
Russia.....	275,000,000
Belgium.....	53,400,000
Serbia.....	3,000,000

² See pp. 319, 336.

³ *Federal Reserve Bulletin*, September, 1917, p. 655.

approximately in the final international balance-sheet for three years (in millions):

<i>Cr.</i>	<i>Dr.</i>
Merchandise balance..... \$6,865	Securities returned..... \$2,200
Relief funds..... 90	Loans by non-government institutions 1,570
	Loans by the United States.. 2,149
	Dividend account (3 years).. 600
	Freights and insurance (3 years)..... 75
	Imports of gold..... 1,111
	Remittances ¹ to friends (3 years)..... 450
<hr/> \$6,955	<hr/> \$8,155

Thus, by Great Britain requisitioning American and other securities held by English investors, to be used in steadying the rate of exchange on New York in the summer of 1915, by loans in our markets, and by final resort to gold shipments, it came about by the middle of 1916 that sterling exchange was pegged at the level of \$4.75-\$4.76.² The high rates of insurance made a lower shipping-point than in normal times, so that this rate does not register a depreciation in English funds by the whole difference below \$4.8665. English exchange has been stabilized within about 2 per cent of the old par. This is the outcome of a difficult problem. The working of credit among the nations thus makes an impressive showing through the unprecedented operations of foreign exchange.

Sterling
exchange
stabilized.

The case of London exchange has been given first place, owing to the dominant position of our trade with Great Britain. Moreover, French had been subordinated to Eng-

¹ Probably the remittances and the dividends fell away from the above estimates; and the relief funds were doubtless much larger than given above. These are the only items in the account not based on definite authority.

² Cf. *supra*, p. 130.

lish exchange by sending French gold through London. Another phase of the exchange, however, which furnishes valuable experience is that with neutral countries.

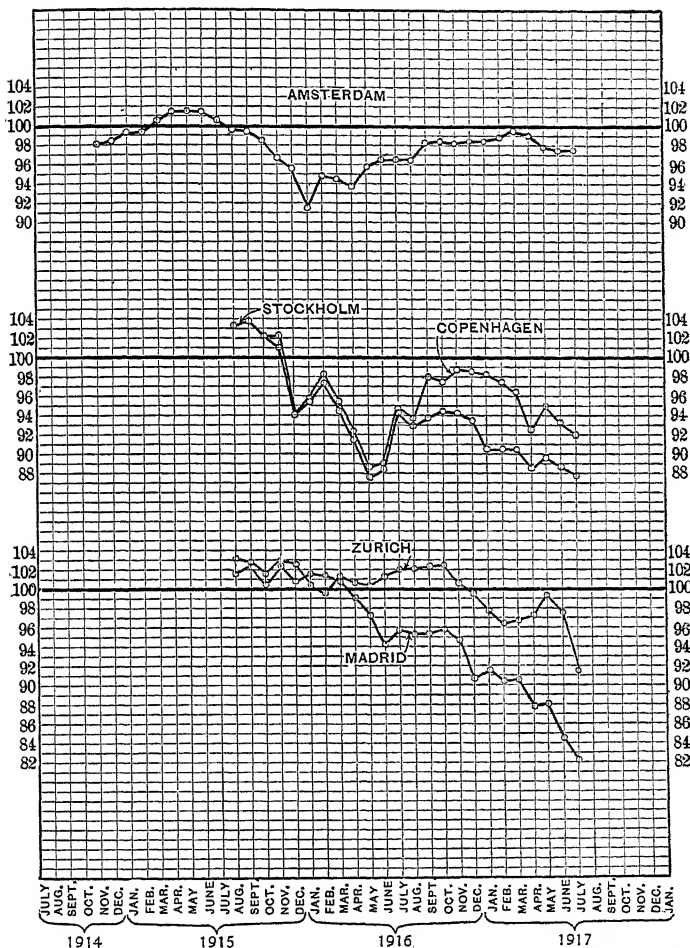
**Exchange on
neutrals.**

The dealings with European neutrals have given rise to difficulties of exchange as well as of international law. They illustrate especially the possibilities of extreme fluctuations in rates, when shipping-points practically disappear because of an inability to remit gold. It makes no difference whether the failure to send gold is intentional or unintentional; the effect is the same. In spite of the colossal balance of trade in our favor, in spite of our large stock of gold, New York exchange has been at a serious discount in Spain, Switzerland, Holland, Denmark, and Sweden (as may be seen in Chart IX). So many cross-currents are at work that no one cause for the depreciation suffices. In the fiscal year of 1915 our exports to Sweden were more than six times the normal shipments; and those to Holland were at the highest that same year. Not until 1917 did our imports from Sweden show a marked increase; while those from Holland remained at normal.

The facts are now well known that the sudden increase in the exports of cotton, copper, and other needed articles from this country to European neutrals indicated purchases by neutral merchants for German account. For a considerable period, indeed, settlements between Germany and the United States went on through Amsterdam. The consequent excess of our exports over receipts from these neutrals, and the demand for New York funds, explains the premium in Europe on New York exchange in the early part of the war (when the lines in Chart IX were above 100). At the end of 1915 for Holland and Scandinavia, and in the spring of 1916 for Spain and Switzerland, exchange

**High rates
early in 1915.**

CHART IX
COURSE OF DOLLAR EXCHANGE
 (CABLE TRANSFERS)
ON PRINCIPAL EUROPEAN NEUTRAL PLACES
 1914-1917



on New York showed a heavy depreciation.¹ In December, 1915, sales of American securities for German account through Holland caused a drop in exchange which led to a shipment of \$500,000 in gold from New York to Amsterdam. Soon after that time Germans also sold American obligations on the Stockholm market.

The main cause, however, of the serious decline in our bills which developed in 1916 was the risk and cost of transporting gold. Moreover, the restrictions of the British blockade were closely drawn against the movement of gold to the neutrals and thence to Germany. Otherwise gold would, by reason of trade balances, have been moving from New York to Holland² and Scandinavia. The censorship of mails and cargoes by British patrol boats, it is reported, delayed letters from New York to Stockholm seven weeks. Hence our Swedish trade fell off in a marked degree in 1916 and 1917 (from exports of \$78.2 millions in 1915 to \$51.9 in 1916 and \$45.1 in 1917).

The war had thrown an exceptionally large trade to Germany and Russia into the ports of Sweden, Norway, and Denmark. With this favorable balance of trade, gold accumulated in Scandinavia. Germany was also obliged to make remittances of gold to Copenhagen. With Scandinavia, as later with us, gold imports were not needed. Their central banks had

Turned
against us.

Scandinavian
gold
abundant.

¹ Par of exchange for \$1 on these countries is as follows:

Denmark, Norway, and Sweden (crown, 0.2680 cents).....	3.73
Holland (florin, 0.4020 cents).....	2.48
Spain (peseta, or franc, 0.193 cents).....	5.18½
Switzerland (franc, 0.193 cents).....	5.18½

² For the purchase of Sumatra leaf tobacco at the spring auction in 1916 at Amsterdam, some \$5,000,000 in gold was allowed to pass through the British blockade from New York. Exchange was about 43 cents to the florin (par 0.4020 cents), while, even at high costs of transportation, the gold could be delivered in Amsterdam at about 41.37 cents per florin.

been obliged by law to pay a fixed price for gold, as an encouragement to importations of gold. So full were the gold reserves of these banks, and so low were bills on New York and London (being at a discount of 6 per cent), that the banks asked for the abolition of the legal requirement, since they could obtain gold in the open market at much less than the fixed price.

Such an anomaly in exchange was not the only one caused by the war. It will be noticed (in Chart VI) that while our exports were increasingly heavy, and while imports of gold were also large, in 1917, that very considerable exports of gold began. While, for military and political reasons, England had been using every effort to stabilize exchange by sending gold to the United States, English exchange did not stand so high in other markets to which gold could not be spared. Consequently, exchange dealers in Spain and Japan found it profitable to send their bills on London to be sold in New York. Having credits here, gold was demanded for export to Spain and Japan. While in past years exports of gold to these countries had been negligible, in the fiscal year 1917 Spain took \$70.3 millions and Japan \$110.5. That is, our gold was being used to cover English trade balances.

The matter of exchange with South American neutrals has been affected by very different considerations from those touching other neutrals.¹ We have needed their copper, tin, nitrates, coffee, and wool. The war largely cut off the European demand for these products, as well as the usual supplies of capital. Formerly their trade had been settled by bills on London. Could these settlements be made by bills on New York (or by "dollar exchange")? Here, as al-

Exports of
gold to Japan
and Spain.

"Dollar
exchange."

¹ Cf. *supra*, pp. 315-317.

ways, exchange reflects the movement of goods and credits. Since we had shown an unexpectedly great power of absorbing our returning securities, and of lending to the Allies, it might be supposed that we could provide the capital needed for developing South America formerly supplied by Europe. If so, and if we are willing to accept the same conditions and terms of credit, we may expect more trade and more remittances. But hitherto a fairly large trade has been settled according to established habits and currents of credit through London. The balance of trade with South America is heavily against us, and we usually pay by our surplus credits on Europe. When our tariff allows such freedom of exchange as England offers, and when we can bring our trade nearer to an equilibrium, we shall have a stronger hold on credit and exchange among our Southern neighbors. The material and spiritual leanings of South America are toward Europe, which has been able to produce, transport, sell, and loan more cheaply than we. Unless these advantages are more or less destroyed by the results of the war, Europe will still remain the dominant power in South American trade and exchange. The establishment of North American banks there will no doubt aid in familiarizing them with exchange on New York and Boston. We may gain trade. But we are not likely soon to dethrone Europe. For many decades our flirtation with silver caused a loss of confidence among foreign countries in the stability of our standard. That we must live down. When we are able to discount acceptances on any scale sent by foreign countries, and at a rate equal to or lower than London and Hamburg, we may then see the world drawing "dollar exchange" instead of sterling exchange as now.

To carry out the process establishing "dollar exchange," we must, if necessary, be willing and able to do without the

use of foreign capital. Thus far we have depended on London, for instance, in carrying the exports of our cotton and wheat. The American exporter, as previously explained, draws a bill on the English importer, which, by an arrangement between the latter and some English bank, will be accepted by it. A New York bank, having bought this bill from the American exporter, sends it to the English bank for acceptance; then, for the period until its maturity, it remains as a piece of discountable paper in the English acceptance market. Meanwhile the New York bank has sold sight exchange against its London credit and freed its funds. If we aspire to have "dollar exchange" drawn on us, it means that we should be able to do what London has hitherto done. That is, we must expect a new situation somewhat as follows: The English importer, or his bank, will arrange with a New York bank to accept the bill drawn on the English buyer by the American exporter; then the bill will remain here in our own acceptance market until maturity, carried by our own banks. At maturity, according to the arrangement, the English buyer or bank will put the New York acceptor in funds to pay it off. Such an outcome requires a rate of interest as low here as in London, and a surplus of capital available for carrying any needed amount of exchange on foreign countries. Perhaps some of these operations may go on in a temporary emergency, such as that created by the present war, but it can be done permanently only if our capital in the acceptance market is as abundant as that of London.

§ 7. The coming of gold in large amounts to this country, as a partial offset to our phenomenal exports of goods, has created some fear of inflation in our money and credit. On the other hand, it has been regarded as placing our credit system in a strong position if the great

volume of gold is left mainly in the hands of the Federal Reserve Board, so that, when the after-war adjustment becomes necessary, it can regulate the movement of gold in the common interest. Nevertheless, the large imports of gold have raised the question of possible inflation, leading to an unsafe expansion of industry, a fictitious rise of prices, and an era of speculation.

In this matter there is involved not only the question of the currency, but of credit. As regards both, there is thus introduced the inevitable issue as to the validity of the quantity theory of money. It is assumed that the new gold increases our currency, and by being offered for goods raises prices. This part of the theory is now given little attention, since more recently emphasis has been laid on the effect of an increase in banking reserves.

Inflation of money and credit feared.

But as regards the currency, now that we are entering on a war requiring unprecedented expenditures, the imports of gold are of surpassing value in enabling us to hold fast to a gold standard. On the most critical question in financing a great war—on which even England for a time vacillated—our government has so far, to its great credit, never even raised the possibility of attempting to borrow by issuing paper money in any form. In this great emergency, for the first time in our history, there has been no confusion between the fiscal and the monetary functions of the Treasury. Until very recently no attention has been even called to this matter. One can hardly place too much emphasis on this piece of good fortune, or this exhibition of conscious intelligence—whichever we may call it. From the devastating evils of a depreciated standard we are apparently to be delivered. But if gold had been going out of the country, if we had not the great good fortune of an enor-

Advantage of large gold stock.

mous excess of exports, if we had had to undergo great sacrifices to obtain the gold to preserve our standard, who does not realize from what an epidemic of political demagoguery we should have been suffering? The advantage of the large stock of gold has thus been of far greater value than any one has realized. All our prices are gold prices; and there has been created no paradise for speculators built on fluctuations of prices due to the fluctuations of a changing standard. For this blessing let us be duly grateful.

The main contention, however, must centre on the effect of the increasing volume of gold upon an inflation of credit, through an increase of bank reserves and of the lending power of the banks. Here is the

Quantity
theory
assumed as
to inflation
of credit.

real issue. And in this part of the question we shall find that the archaic and fallacious quantity theory does not explain the facts.

For instance, the old Ricardian formula has been appealed to, that our vast imports of gold would raise prices here, cause greater imports of goods, resulting later in exports of gold.¹ The trouble with this outgrown theory is that this order of causal events does not agree with the facts, and that prices are influenced by many other forces not even hinted at in speaking only of the quantity of the circulation.

The pivotal point is the effect of large imports of gold in producing an inflation of credit which thus becomes the cause of a rise of prices. It is urged that an increase of bank reserves encourages an expansion of credit, and that additional purchasing power, following the expansion of credit, is a familiar and inevitable fact.² A man

¹ In support of this discussion, reference has been made to Seligman, *Principles of Economics*, pp. 465-466.

² Cf. *National City Bank Bulletin*, November, 1916, p. 3. But it is also noted by the same publication that at the end of 1916 there had been no undue expansion, in fact, and that the danger was as yet only theoretical.

walking down Fifth Avenue may knock a woman down, but merely because he is so walking it does not follow that he will knock a woman down. In such theorizing about the effect of enlarged reserves a vital rule in banking practice is ignored. It is assumed that, if reserves increase, poor loans will be made; that what may happen, must happen. In short, that if the banks can lend, they are sure to abuse their lending power, and not scrutinize the assets offered as they should do. For in no other way can there be inflation of credit. If legitimate short-time loans have been made because of increased gold reserves, then they will be liquidated on maturity; and, if necessary, loans can be contracted without disaster. Liquidation is impossible only if the assets are unliquid. Therefore, assuming legitimate banking, there can be inflation only when an increase of loans (and deposits consequent on loans) is not based on a corresponding increase of quick assets representing the movement of salable goods or securities. Loans can be safely increased, so long as assets are sound and liquid. The question the banker must ask is, If my reserves are above the legal limit, is the loan offered a safe one? To say that, because reserves are large, bankers will no longer exercise good judgment in making loans, is not a good ground on which to build up a theory of prices.

Large
reserves do
not
necessarily
bring large
loans.

Indeed, the very facts of record in this period of large gold imports work against such theorizing. In November, 1914, when the Federal Reserve system was put into operation, the lowered requirements for reserves were a matter of wide publicity. The rise of surplus reserves for the New York banks alone from about \$14,000,000 to \$140,000,000 (above the new legal limit) was marked and known of all

Facts are
against the
theory.

men (although actual reserves did not change much), and yet loans of the same banks in the turbulent days of November and December, 1914, showed no increase. (See Chart VIII.) We heard much at the time about the banks having the power to increase loans by \$3,000,000,000 if they wished. But they did not wish. It cannot be assumed by theorizers, therefore, that an increase of reserves must be inevitably followed by an expansion of credit, an increase of purchasing power, and a consequent rise of prices.¹ The causes affecting the level of prices are too numerous to allow any one cavalierly to give a quick solution by assigning an increase of money and credit as the one controlling cause.

The presence of the new Federal Reserve Banks in the situation (November 16, 1914) after the crisis had passed the climax and had been dealt with by devices belonging to the old banking régime, produced no marked positive effects on credit. The main effect has been psychological. The new system has acted as a gyroscope to stabilize the whole machinery of banking and credit. It is now well understood that there never need be again a grasping after reserves, so long as member banks hold rediscountable paper. There can never again be any paroxysms of credit in which loans are called and legitimate borrowers are unable to obtain credit and acceptable means of payment. The whole emphasis is to be placed on the quality of the loans made, and not upon the amount of the

Effect of
Federal
Reserve
system.

¹ Reference has been made to the very great expansion of European currencies, and the temptation has arisen to ascribe high prices there to the increased circulations and to enlarged credit. Yet from the same quarter comes the admission that the heavy depression produced by the war has prevented expansion, especially in Europe. If so, the striking rise of European prices cannot be ascribed to expansion of money or credit. Of course, if the paper money became inconvertible and depreciated, prices would rise; but that is a horse of another color.

circulation or the percentage of reserves. Such devices as the cotton pool are now made obsolete by the Federal Reserve system.

This is not the place to estimate the full value of the new system in various ways to our trade and credit. But in regard to the large imports of gold, and to the matter of inflation, its policy is of importance. The old tendency of individual banks to store up gold has not entirely given way to a reliance on rediscounts. An institution capable of taking the leadership in dealing with gold exchange and aiding in the most effective management of our stock of gold, when questions as to its import or export arise, has never before existed among us. It can now play a powerful and constructive part in our international as well as in our domestic operations of credit. It can do much judiciously to prevent the expansion of illegitimate credit at home by its use of the rediscount function in any period when the public seems to be losing its head.¹ Little heed need be given to the expansion of the Federal Reserve notes, provided the present law remains unchanged, by which these notes are not allowed to be counted in the reserves of member banks. In this way the expansion of the circulation may go on under a normal demand for currency; but it is fully inhibited from passing over into an uncontrolled influence in expanding credit. Thus the increase of the circulation in itself need not be a cause of inflation by the member banks. The retention of this feature of the Act is quite as important

The new system can check inflation.

¹ Inflation of credit can best be checked at its first appearance in the member bank. The existing Act could be improved by an amendment charging a commission, rising in amount as the percentage of rediscounts to the capital of the bank rises, in addition to the uniform rate of interest fixed for each district. Such a device, however, will be serviceable only when the banks make a greater use than now of the rediscounting privilege.

as the policy of the Federal Reserve Board in trying to draw gold into its hands by advancing the time when member banks should finish paying in their deposits, since both aim against expansion of credit. If other than gold money enters into reserves of banks, the control of inflation, of course, is not gained merely by the control of gold. At present the Federal Reserve notes are so hedged about by safe restrictions, and so well supported by gold, that their volume can create no concern.¹ Their amount can, therefore, be left to automatic adjustment.

That a rise of prices, however, has gone on contemporaneously with the imports of gold there can be no question. But it by no means follows that the imports of gold are the cause of the higher prices. It should be noted at once that the question of prices transcends the limits of influence ascribable to the increase of the gold circulation; for prices have risen as markedly in the countries from which the gold has come. Such facts show that other causes are more potent than the quantity of the circulation.

While there is no place here for any extended study of prices, the appearance of certain general causes are so obvious that they may be briefly introduced. With us there has been no depreciation of our standard of prices; so that the influence of depreciation of money upon prices, as in Germany, may be eliminated at once. The non-monetary causes, on the other hand, are conspicuous: (1) He who runs can read the effects of an extraordinary scarcity of labor, an intense de-

Gold and
prices.

Other causes
affecting
prices.

¹ Contraction, which may come with the cessation of war, is quite another matter. Whether we are called upon for gold or not will depend upon the future relation between exports and imports of goods and securities. Of course our exports of war supplies will cease. In the then period of readjustment a hand upon the brake may be desirable in steadying the movement of gold and its effect upon credit.

mand for it, especially in munition factories and in government employ, magnified, of course, as the armies are withdrawn, which have resulted in a very great rise of wages for the same degree of efficiency. The inevitable outcome in raising expenses of production and the prices of goods has followed and is a matter of common observation. (2) The effect of the war in destroying shipping has obviously brought about higher rates of transportation by sea, and on a scale never before equalled. Higher freights on imports have raised our prices. (3) The withdrawal of men from agriculture in Europe has lessened the crops of the world, created an intense demand for our breadstuffs and other exports, and this fierce competition has raised prices to our own consumers, irrespective of the expenses of production. (4) Moreover, the exceptional European demand for our coal, sugar, steel, copper, and the like, have raised to us the prices of all materials of manufacture to a scarcity level. Here, in brief mention, are listed forces working to raise prices which have no relation whatever to the volume of the circulation, or to the expansion of credit. In the face of such facts it seems like bigotry, or stubborn pride of opinion, to revert to the obsolete theory that the rise of prices can be accounted for only by the quantity of money in circulation, or by the increase of bank reserves. At the best it is only a one-sided theory which omits such powerful forces from consideration under an *alibi* usually termed "other things being equal." On this price question the "other things" have, like the whole body of the camel, pushed into the tent of the quantity theorists until they have occupied the whole space.

§ 8. Since credit is a means of passing capital from the one creating it to the one using it, we are obviously concerned with the forces behind the supply of capital.

The sudden outbreak of the European War so disorganized our trade and so disarranged the ordinary machinery of credit that, although we were not then involved in the struggle, it was regarded as an indescribable calamity to us. Like other young nations, we had been borrowing capital from abroad for the development of our own resources. What would happen to us, a debtor country, if we were cut off from the use of this foreign capital by the return of our \$6,000,000,000 of securities? It was a staggering question. But, if it had been added that we must not only take back a large part of our investments, but even be called on to make enormous loans to other countries, the proposal would have been regarded with undisguised incredulity. Then, if, on top of all these demands, it were prophesied that we must loan untold billions to our own government, even optimistic persons would have frankly said that it was clearly impossible. How could a debtor nation suddenly become a creditor nation on a most imposing scale? This is one of the amazing revelations of the war. Out of what seemed inevitable calamity, could there come such material advantages?

Amazing
demands
upon our
credit.

The cross-currents and contradictions of this war often appear inexplicable. It is because unexpected results have been set in operation by psychological forces which could not have been estimated beforehand. Not the least important of these is the psychology of capital-making. No one has doubted the phenomenal productive capacity of the United States. The energizing influence of the new era of power and machinery has been displayed on the vast natural resources of this country in an expanding volume of products unequalled by any other nation. As a consequence, the estimated national wealth of the United States has

Possibility
of saving.

been placed at \$187,000,000,000¹ in 1912 as against \$88,000,000,000 in 1900. Such is the basis on which the supply of capital rests. Long since it has been an economic commonplace to say that saving of capital depends on two things: (1) The extent of the margin above the necessities of life from which savings can be made; and (2) the strength of the desire to save. As regards this margin, we have never realized its extent. In recent decades we have seen the rise of large fortunes and a display of extravagance which has advertised in every possible way our enormous capacity for consumption in things not actually necessary to physical existence. No one can begin to estimate what would be the effect on the accumulation of American capital if all or even a large part of this margin were saved. We have never fully recognized that, as things have been going on in times of peace, the useless destruction of wealth by expenditure on unnecessary consumption—articles which when consumed leave nothing in their stead—has constantly been as great as that caused by vast armies in time of war. Then apply to our uncounted billions of surplus above necessities an exceptional stimulus to the will to save. The effect may seem like a miracle, but it is all within the limits of achievement, if we so wish.² When the war broke out, the uncertainty caused by the shock and the general depression induced by the world-wide disaster almost unconsciously

¹ Cf. *Estimated Valuation of National Wealth, 1850-1912*, Bureau of the Census, 1915, p. 15.

² It was long ago explained that countries with a simple economic organizations when devastated by war recover with startling rapidity, provided productive laborers are returned to the soil and to factories. If supplied with only the scanty capital sufficient to cover the means of subsistence and the minimum of the necessary implements of production, in a very short time a country by such enforced saving will accumulate as large a capital and will turn out as much wealth as before the war. The situation is one which develops enforced saving. Of course new and expensive equipment must wait.

led every one to economize. Not one of our appliances of production, nor any of our resources, had ceased to exist. For a time the wheels of industry ran at low speed; yet the loss was not in the factors of production, but only in the temporary reduction of our usual output. In this period there was much idle capital and rates of discount were low. The crops of 1914 had been very large, but there had been no new enterprises started, and no revival of trade. As a consequence, accumulations on a large scale were dammed up waiting for employment. The floating capital sufficed to take up our returning securities. Moreover, widespread economy was aided by a cessation of expenditure for European travel. Under various influences working to repress unnecessary consumption capital was silently being accumulated. Estimating American savings by the amounts of new securities floated each year and by the rise of savings accounts, the normal annual addition to our capital before the war was at a low estimate far beyond a billion dollars. But after the readjustment had been made in 1915 to the new war conditions, by 1916 the wheels of industry and all the factors of production began to move at the highest possible speed. Under these conditions enormous accumulations of capital were possible. Apply to these possibilities the magic of any new incentive to saving, such as a patriotic call to invest in a government loan, and the results may well seem astonishing. There is, however, no miracle. The result is the outcome of a stimulated desire to save, working upon a vast margin over and above the necessities of life. It is an illustration of the psychology of capital-making. It is the only convincing explanation of the means by which we so suddenly changed from a debtor to a creditor nation.

Effect of the
war on
saving.

Nevertheless, the transfer of capital to the borrower by credit is not as popularly conceived. Wealth may have its value expressed in money, but the title to wealth may be transferred without the use of money. So with capital. But also, much capital, like mills, furnaces, factories, steamships, are in a form which cannot be passed from hand to hand. One subscribing \$1,000 to a government loan cannot give a part of his fixed capital, nor of his cattle. He pays supposedly in money, but money is very little used in such operations. In fact, through credit he obtains a means of payment by which he pays for his bond. He gets the right to draw on such a credit if he has bankable wealth or property (including securities, which are titles to wealth). By credit he is able to obtain an acceptable means of payment based on bankable wealth. In such a case he transfers to the government a claim in the form of general purchasing power over goods. Formerly he directed its consumption; now the government directs its consumption. He foregoes all use of that wealth (or capital) and gets in return a bond and annual interest. He may have formerly used up wealth out of his income to the amount of \$1,000, but now by buying a bond he has saved it, even though the government uses it for munitions of war. But still it cannot be assumed that a large loan is wholly obtained from new savings. Only to the extent that people economize and are thereby enabled to pay for bonds is that true.

How private capital is transferred by credit to the government.

To a large extent loans come from those who already have capital. One man may pay for his bond out of his running bank balance; but in that case he transfers to the government a claim on the active funds of the country, since the bank has invested what was left with it in the industrial operations

Where loans come from.

of the country (which appear in bank assets). The government passes that claim to a mill for steel plates, and legions of such claims are offset, as usual, through clearing-houses. No money need pass. Other persons, for instance, may sell securities in order to buy the government bonds. Securities are titles to wealth and income. When they are sold, the seller has a sum to his credit at a bank; and the process, then, is the same as that just described. The government gets a claim against present goods in return for giving a promise to pay in the future. The transaction is thus purely a credit operation involving the exchange of goods, with an obligation to return an equivalent in the future. The extent to which a government can borrow depends upon the quantity of goods it can take under its control without lessening the general productive capacity of the country. The amount of money in circulation or in bank reserves has little to do with it. That quantity of money is needed which, according to the country's monetary habits, will provide the usual mechanism of exchange in circulation or bank reserves for doing the work, whether it is concerned with a volume of peace or of war goods. Of course clumsy management by the Treasury might call for loans to be paid in by subscribers in specified kinds of money and then not disburse them promptly enough to have them reach their former equilibrium before new loans were offered; only in such a case would the monetary supply seem to be insufficient.

When in the course of the rapid extension of our exports it came to be evident that payment of balances could not well be made in gold, credit operations, running forward into the future, were inevitable. As we have seen, the quantity of our securities returned from Europe were an inadequate offset for the sum owing us on balance. Hence, loans to the Allies were a logical sequence to the enormous purchases of our goods; and the beginning of

these loans coincides with the time when our exports began to expand. Hitherto we had looked askance at the securities of foreign governments, but foreign loans, if we could float them, were an international necessity. Moreover, the financial position of Great Britain was shown to be very strong, while France, a weaker sister, was supported by the former. Then came the first of an important series of credit transactions between foreign countries and ourselves, which may be regarded as the inaugural of a new era for us in the sphere of international credit. In order to pay for their purchases of our goods, loans were offered with the understanding that the proceeds would be expended here. That is, our investors gave the Allies general purchasing power, which was at once transferred to the sellers of our goods, who, of course, had accounts in the same group of banks through whom the loans were managed. The foreign buyers had pledged us payment in the future. Again, there was here no reason for the use of money to any important extent, except in adjusting balances between our banks; and credit appeared here, also, in making offsets. Credit of the nations plays a more and more important rôle as the transactions in the war grow larger.

Loans to our Allies inevitable sequence of large exports.

The loans to foreigners have taken different forms. The first feeler in our market was a loan of \$10,000,000 to France for one year, November 5, 1914, which was granted and paid off at maturity. Early in 1915, apropos of the proposed market for acceptances here and the creation of paper which lending banks might offer for discount at the Federal Reserve Banks, \$25,000,000 of Russian acceptances were offered. To allow Russia to buy of us, our bankers agreed to accept six-month bills drawn on them for purchases from American houses. This method seems to have been discouraged and the bills

Early foreign loans.

were paid off. There seems to have been, on the other hand, a strong preference here for collateral loans. In the summer of 1915 a loan was negotiated for France by the Rothschilds, amounting to \$43,000,000, on the deposit of bonds of the Pennsylvania and St. Paul Railways. A well-known banking-house offered in New York a one-year collateral loan guaranteed by the Bank of France for \$20,000,000, on which acceptances were sold. Much later eight London joint-stock banks united to establish a credit here of \$50,000,000 for six months, but it was renewed at maturity at a higher rate. The selling of English Treasury bills in our market was once deprecated by the Federal Reserve Board, as tending to load up member banks with unliquid paper, on the assumption that the bills would not be paid off, but renewed, and thus be in effect long-term paper; but, later, large sums of these bills have been sold here.

The one large loan, however, which tested our attitude to borrowings by foreign governments, and which was forced by the condition of sterling exchange, was the Anglo-French five-year 5 per cent external loan for \$500,000,000 in October, 1915, the result of the efforts of an English and French commission. These bonds are the joint obligation of the British and French Governments, payable at the end of five years, or convertible at option into 4½ per cent 15-25 year bonds. A syndicate of bankers from many cities took the whole issue at 96¼, offering the bonds to the public at 98, to yield about 5½ per cent to the investor.¹ This was the first foreign loan of any magnitude to be placed in this country.

Anglo-French
loan.

¹ It appears that at the close of the sixty days set for the syndicate, \$280,000,000 were withdrawn for investment at 96¼, \$40,000,000 sold to the public at 98, and the remaining \$180,000,000 distributed to members of the syndicate through whom the bonds were sold in the open market. They have since sold under 85.

Since then, in 1916 and 1917, before we entered the war, other loans have been placed here by Great Britain, France (one for \$94,500,000 through the American Foreign Securities Company)—Paris, Bordeaux, Lyons, Marseilles—Russia, Italy, Switzerland, Norway, Canada, Newfoundland, Argentine, and China, totalling \$1,570,000,000.¹ Immediately after we entered the war our government, on April 25, 1917, by virtue of the Act of April 24, 1917, made the first direct loan to the Allies, one of \$200,000,000 to Great Britain. To September 25, 1917, the total of loans to Great Britain, France, Italy, Russia, Belgium, and Serbia by the government of the United States direct was \$2,426,400,000.² It was then no longer necessary for the Allies to place loans in our open market.

Private loans
to foreign
countries.

Loans by the
United
States.

In addition, various other loans to foreign banks and governments through our non-governmental institutions of credit must certainly exceed \$200,000,000, and may be very much more. Thus, in the three years of war this country, besides receiving home its own securities amounting to at least \$2,200,000,000, has also loaned to foreign countries not less than \$4,200,000,000. So large a lending power had been unexpected, and it makes the question of the source of our lending power of practical as well as of theoretical interest. Our success, in addition, in making war loans of many billions to our own government belongs to another phase of credit.

Total lending
power.

We may, therefore, properly close our present study at this point before the United States has fairly entered the European War.

¹ For details, see Appendix IV, D.

² Cf. p. 340.

APPENDIX I

GREAT BRITAIN

A

CURRENCY AND BANK NOTES ACT, 1914

CH. 14, 4 AND 5 GEO. 5 [6 AUGUST, 1914]

*Be it enacted * * **

1.—(1) The Treasury may, subject to the provisions of this Act, issue currency notes for one pound and for ten shillings, and those notes shall be current in the United Kingdom in the same manner and to the same extent and as fully as sovereigns and half-sovereigns are current and shall be legal tender in the United Kingdom for the payment of any amount.

(2) [Form and design as directed by the Treasury.]

(3) The holder of a currency note shall be entitled to obtain on demand, during office hours at the Bank of England, payment for the note at its face value in gold coin which is for the time being legal tender in the United Kingdom.

(4) The Treasury may, subject to such conditions as to time, manner, and order of presentation as they think fit, call in any currency notes under this Act on paying for those notes at their face value in gold.

(5) [Currency notes subject to forgery, larceny, stealing, and truck acts, same as bank-notes or current coin of the realm.]

(6) For the purpose of meeting immediate exigencies all postal orders issued either before or after the passing of this Act shall temporarily be current and legal tender in the United Kingdom in the same manner and to the same extent and as fully as current coins, and shall be legal tender in the United Kingdom for the payment of any amount.¹

The holder of any such postal order shall be entitled to obtain on demand, during office hours at the Bank of England, payment for the postal order at its face value in any coin which is for the time being legal tender in the United Kingdom for the amount of the note.

[Post Office Act, 1908, Section 24 (1) (b) and (c) do not apply.]

This subsection shall have effect only until His Majesty by proclamation revokes the same, and any proclamation revoking this sub-

¹ Revoked by Proclamation, February 3, 1915.

section may provide for the calling in or exchange of any postal orders affected thereby.

2. Currency notes may be issued to such persons and in such manner as the Treasury direct, but the amount of any notes issued to any person shall, by virtue of this Act and without registration or further assurance, be a floating charge in priority to all other charges, whether under statute or otherwise, on the assets of that person.

3. The governor and company of the Bank of England and any persons concerned in the management of any Scottish or Irish bank of issue may, so far as temporarily authorized by the Treasury and subject to any conditions attached to that authority, issue notes in excess of any limit fixed by law; and those persons are hereby indemnified, freed, and discharged from any liability, penal or civil, in respect of any issue of notes beyond the amount fixed by law which has been made by them since the first day of August nineteen hundred and fourteen in pursuance of any authority of the Treasury or of any letter from the Chancellor of the Exchequer, and any proceedings taken to enforce any such liability shall be void.

4. Any bank notes issued by a bank of issue in Scotland or Ireland shall be legal tender for a payment of any amount in Scotland or Ireland respectively, and any such bank of issue shall not be under any obligation to pay its notes on demand except at the head office of the bank, and may pay its notes, if thought fit, in currency notes issued under this Act:

Provided that notes which are legal tender under this section shall not be legal tender for any payment by the head office of the bank by whom they are issued for the purpose of the payment of notes issued by that bank.

This section shall have effect only until His Majesty by proclamation revokes the same, and any proclamation revoking this section may provide for the calling in or exchange of notes affected thereby.

5.—(1) In this Act, the expression “bank of issue” means any bank having power for the time being to issue bank notes.

(2) [Short title, as above.]

(3) [Applies to Isle of Man, but not to any other British possession.]

B

PAPER ISSUED BY THE TREASURY ON AUGUST 27, 1914, RELATING TO THE ISSUE OF CURRENCY NOTES

The following are the arrangements made in accordance with the provisions of the Currency and Bank Notes Act, 1914, for placing currency notes at the disposal of the banks for meeting exceptional demands.

(1) ENGLAND AND WALES

Currency notes are issued through the Bank of England to bankers as and when required up to a maximum limit not exceeding, in the case of any bank, 20 per cent. of its liabilities on deposit and current accounts.

The amount of notes issued to each bank is treated as an advance by the Treasury to that bank bearing interest from day to day at the current Bank rate, the security for the Treasury advance consisting of a floating charge on the assets of the bank up to the amount of the notes issued. The bank is permitted to repay the whole or any part of any advance at any time. Any amount repaid can be renewed if and when necessity arises, provided that the total amount outstanding at any one time does not exceed the authorised percentage of the bank's liabilities.

Any sums received by the Bank of England in repayment of advances are either applied forthwith to cancelling any currency notes which have been returned from circulation and are for the time being in the hands of the Bank of England, or, in so far as any such sums may exceed the amount of currency notes returned from circulation in the hands of the Bank of England at the time of receipt, are carried to a separate account in the books of the Bank of England and applied to the cancellation of notes as and when they return from circulation.

In order to give the banks the advantage of the credit allowed under this arrangement even though actual currency may not be required, it is proposed by the amending Bill to take power to issue certificates in lieu of actual notes.

The effect of the issue of these certificates will be that the banks will be able to obtain credits with the Bank of England on the same terms as currency notes and the expense of printing and handling notes will be avoided except in so far as the notes may be required for actual circulation.

(2) SCOTLAND AND IRELAND

The arrangement in England and Wales applies generally to Scotland and Ireland; but in the case of banks of issue in Scotland and Ireland currency notes, instead of being issued to the public, are used as cover for the banks' own notes. This arrangement has in practice the effect of enabling the Scottish and Irish banks of issue to exceed the normal limits of issue of fiduciary notes so long as such excess issues are covered by currency notes.

The new certificates will also be available for the purpose of cover for these issues.

[Provision for publication of returns each Friday.]

C

(1) PROCLAMATION POSTPONING PAYMENT OF BILLS OF
EXCHANGE, AUGUST 2, 1914

* * * If on the presentation for payment of a bill of exchange, other than a cheque or bill on demand, which has been accepted before the beginning of the fourth day of August, nineteen hundred and fourteen, the acceptor re-accepts the bill by a declaration on the face of the bill in the form set out hereunder, that bill shall, for all purposes, including the liability of any drawer or indorser or any party thereto, be deemed to be due and be payable on a date one calendar month after the date of its original maturity, and to be a bill for the original amount thereof increased by the amount of interest thereon calculated from the date of re-acceptance to the new date of payment at the Bank of England rate current on the date of the re-acceptance of the Bill.

Form: Re-accepted under Proclamation for £. (insert increased sum).

Signature
Date

D

PAPER PUBLISHED BY THE TREASURY, AUGUST 13, 1914,
REGARDING THE DISCOUNT OF BILLS BY THE
BANK OF ENGLAND

The Chancellor of the Exchequer has for several days past been in close and constant consultation with the Governor of the Bank of England, the bankers, the accepting houses and the principal traders for the purpose of providing the country with all the banking facilities it needs in the present emergency. We are now able to announce that the Chancellor of the Exchequer has completed arrangements with the Bank of England for terminating the present deadlock in the money market, and for enabling the trade and commerce of the country to resume its normal course. The greatest difficulty arose from the stoppage of remittances to London both from the provinces and from other countries, not only in Europe, but in all parts of the world. This caused a breakdown in the foreign exchanges and deterred bankers from discounting bills in the normal way. To overcome this difficulty as well as that of providing traders in this country with all the banking facilities they need, the Government have now agreed to guarantee the Bank of England from any loss it may incur in dis-

counting bills of exchange either home or foreign, bank or trade, accepted prior to August 4, 1914. Accordingly we are authorized to make the following announcement:—

“The Bank of England are prepared on the application of the holder of any approved bill of exchange accepted before the 4th day of August, 1914, to discount at any time before its due date at Bank rate without recourse to such holder, and upon its maturity the Bank of England will, in order to assist the resumption of normal business operations, give the acceptor the opportunity until further notice of postponing payment, interest being payable in the meantime at 2 per cent. over Bank rate varying. Arrangements will be made to carry this scheme into effect so as to preserve all existing obligations.

“The Bank of England will be prepared for this purpose to approve such bills of exchange as are customarily discounted by them, and also good trade bills and the acceptances of such foreign and colonial firms and bank agencies as are established in Great Britain.”

E

FORMAL RECORD OF ARRANGEMENT BETWEEN THE TREASURY AND THE BANK OF ENGLAND, DATED AUGUST 27, 1914, EXPANDING D

1. The Bank of England will, upon the application of the holder of any approved bill of exchange before August 4, 1914, discount such bill at any time before its due date at Bank rate without recourse to such holder.

(In the case of date bills, the acceptance, if undated, may be deemed to have been given in course of post from the date on which the bills were drawn.)

2. It will be for the Bank of England to decide in any particular case whether a bill is to be approved, but the Bank will be prepared to approve such bills of exchange as are customarily discounted by them, and also good trade bills and the acceptances of such foreign and colonial firms and bank agencies as are established in Great Britain.

3. Upon the maturity of any bill so discounted the Bank of England will give the acceptor the opportunity of postponing payment pending further notice, interest being payable in the meantime at 2 per cent. over Bank rate varying.

4. The date at which such further notice shall be given shall be determined by the Bank after consultation with the Treasury.

5. Arrangements will be made for preserving all existing obligations, so far as possible, in respect of bills discounted.

6. The Bank of England are to be indemnified for any action taken by them in the matter, and to be guaranteed by the Treasury against any loss which may be incurred by the Bank as the result of their operations.

7. Such loss is to be calculated in accordance with an account to be kept in the following form:—

£	£
Amount of approved bills discounted at Bank rate, payment of which has been postponed.....	Amount realized by the Bank in respect of approved bills, payment of which has been postponed.....
Net deficiency.....	Interest received at 2 per cent. (above bank rate carrying) in respect of approved bills, payment of which has been postponed, less allowance to the Bank for interest (at 1 per cent. below Bank rate varying) and expenses (one-half per cent.).....
£	£

8. The Chancellor of the Exchequer has undertaken to ask Parliament to pass the legislation necessary for giving statutory authority for this scheme, and for charging against the Exchequer the amount of the ultimate loss which may be incurred by the Bank in carrying it into effect.

APPENDIX II

FRANCE

A

FRENCH LAW OF AUGUST 5, 1914, SUSPENDING SPECIE PAYMENTS

Art. 1. The amount of note-issues by the Bank of France and its branches, fixed at the maximum of six milliards eight hundred millions (6,800,000,000) (law of December 29, 1911) is raised provisionally to twelve milliards. It will be possible to pass this limit by a decree made by the Conseil d'État on a proposal from the Minister of Finance.

Art. 2. [The limit of the Bank of Algeria was also raised from 300,000,000 to 400,000,000, and denominations of 5 francs were authorized.]

Art. 3. Until otherwise ordered by law, the Bank of France and the Bank of Algeria are relieved from the obligation to redeem their notes in specie.

Art. 4. [Approves agreements made between the Minister of Finance and the Governor of the Bank of France, and the Director General of the Bank of Algeria.]

Suspension of specie payments by colonial banks was authorized on August 4, 1914. See Dalloz: *Guerre de 1914. Documents officiels*, vol. I, from which the French laws and decrees were taken.

B

MORATORIUM

On July 29, 1914, the first moratorium was decreed. The maturity of obligations entered into before August 1, 1914, and falling due after that date or before August 15, 1914, was postponed 30 days.

On August 2, 1914, the above decree was applied to deposits in banks and institutions of credit: if less than 250 francs, the whole could be drawn; if more than that sum, only 5 per cent of the excess, in addition to 250 francs; commercial or industrial employers of labor could draw the whole for wages; and the decree was applied to savings and insurance contracts.

These two early decrees were completed by that of August 9, 1914, which follows:

DECREE OF AUGUST 9, 1914

Art. 1. For all negotiable instruments falling due after July 31, 1914, inclusively, or maturing before September 1, 1914, the date of payment is delayed thirty days, on condition that they were underwritten previous to August 4, 1914.

The negotiable instruments in the view of the present article are: bills of exchange; notes to order, or to bearer; checks, with the exception of those presented by the drawer himself; orders and warrants.

Not falling under the application of the present article are negotiable instruments issued upon the public Treasury.

Art. 2. [Applies to commitments for merchandise entered into before August 4, 1914.]

Art. 3. [Applies likewise to advances on movables.]

Art. 4. [Applies to demands for deposits, except up to 250 francs, plus 5 per cent, etc.; not to demands for paying labor; not to those whose establishments have been requisitioned, etc.]

Art. 5. The postponement of thirty days dating from August 1, 1914, is applicable to the redemption of obligations or contracts of insurance, of capitalisation or savings for fixed terms, or those stipulated to be redeemable at the will of the owner or bearer.

On August 10, 1914, all prescriptions and limitations, civil, commercial, or administrative were suspended until the end of the war. They were further treated by the decree of December 16, 1914, and modified by that of May 12, 1915.

The main moratorium of August 9 was given more in detail on August 29, 1914, and extended until October 1, 1914. On the same day, a decree suspended payments on obligations of departments, communes, etc., until the end of the war.

From time to time the moratorium was extended by many decrees as follows:

September 27, 1914,	30 days to November 1, 1914
October 27, 1914,	60 days to January 1, 1915
December 15, 1914,	60 days to March 1, 1915
February 25, 1915,	60 days to May 1, 1915
April 15, 1915,	90 days to August 1, 1915
June 24, 1915,	90 days to November 1, 1915
October 16, 1915,	60 days to January 1, 1916
December 23, 1915,	90 days to April 1, 1916
March 18, 1916,	90 days to July 1, 1916
June 24, 1916,	90 days to October 1, 1916
September 20, 1916,	90 days to January 1, 1917

Out of a total of 4,480 million francs in August, 1914, postponed at the Bank of France (from which should be deducted 800 millions for

those under the colors or in territory occupied by the enemy) the amount remaining December 14, 1916, was only 1,346 millions. Successful efforts had been made to have postponed debts paid up, and in December, 1916, practically no delay was granted unless good cause could be shown to a magistrate. Thereafter moratorium decrees ceased.

C

DECREE OF SEPTEMBER 27, 1914, CONCERNING TRANSACTIONS IN SECURITIES

Art. 1. Provisionally suspended are all demands for payment and all judicial actions relative to the sale and purchase in the period previous to August 4, 1914, of *rentes*, public securities, and other transferable instruments, as well as the dealings for carrying them forward.

The sums due by reason of these sales, purchases, and carrying charges should be increased by interest for the time of postponement at the rate of 5 per cent. per annum.

This decree was modified by that of September 14, 1915, which brought pressure on all not under the colors or in occupied territory to make payment of 10 per cent. of differences due in settlements, and 6 per cent. on delayed payments.

On July 3, 1915, the sending out, or reëxportation under any customs rule, of gold in bullion, ingots, bars, powder, articles, or coin was forbidden by decree. This prohibition, however, did not apply to exportations by the Bank of France.

August 26, 1915, silver coins were included.

APPENDIX III

GERMANY

A

GERMAN BANK ACT, MARCH 14, 1875¹

TITLE I—GENERAL DIRECTIONS

§ 1. The right of issuing notes can be conferred only by an Act of the Empire; nor can any issues be extended beyond the amount fixed by the present Act except by a similar Act. To the bank-notes issued according to this Act are assimilated the State paper notes which have been transferred to a bank with a view to increase its working capital.

§ 2. No one can be forced to accept bank-notes tendered for payments which by law must be paid in money; nor can the offices of the Empire be obliged by virtue of any law of a State [*Landesgesetz*] to receive bank-notes in payment.

§ 3. Bank-notes are to be issued only in denominations of 100, 200, 500 and 1000 marks, or in multiples of 1000 marks.

§ 4. Every bank is bound to redeem its notes on presentation at their full nominal value. Banks are also bound to accept their notes at their full nominal value in payments, and that not only at the central establishment, but at all the branch offices. [Must redeem mutilated notes.]

§ 5. [Soiled or damaged notes not to be reissued.]

§ 6. The calling in and withdrawal of the notes of a bank, or of any kind of bank-notes, can only take place with the special permission, or by order, of the Federal Council. [Order granted in case of soiled notes, loss of right to issue, and for series. Council to prescribe notices and regulations for the security of note-holders.]

¹ The German text is given by Bezold, *Gesetzgebung des Deutschen Reichs*, 2, Theil I, pp. 255-381. A translation in English by E. Seyd was published in the *Journal of the Statistical Society*, 1875, pp. 267-279; and later another was printed in *U. S. National Monetary Commission* (1910), No. 574, pp. 128-134. The last document also reprints the statute of May 21, 1875, the law of June 7, 1899, and the law of June 1, 1909.

In view of the difficulty of access by most readers to the sets of documents above mentioned, it was thought worth while to present herewith the original Bank Act, so that the relation of recent war legislation to it might be conveniently studied.

§ 7. No bank issuing notes has power—(1) to accept bills of exchange; (2) to buy or sell on time, either for its own account or for account of others, merchandise or negotiable securities, or undertake to guarantee the fulfilment of such transactions.

§ 8. Banks issuing notes are obliged to publish in the *Reichsanzeiger* at their own expense: (1) a statement of their assets and liabilities on the 7th, 15th, 23rd and last day of each month, not later than the fifth day following these dates. (2) An exact balance sheet of assets and liabilities, as well as the profit and loss account of the year, to be published not later than three months after the close of their business year. The weekly publication must specify the following amounts: 1) Under the head of liabilities: the subscribed capital; the surplus; notes in circulation; other demand liabilities; liabilities at notice; remaining liabilities. 2) Under the head of assets: the stock of coin and bullion (*i. e.*, German current coins, gold in bars or foreign coin, at the rate of 1392 marks to the pound fine); Imperial Treasury notes [*Reichskassenscheine*]; notes of other banks; bills of exchange; Lombard advances [*i. e.*, advances on pledges]; securities; remaining assets. The Federal Council will decide which part of the assets and liabilities in the yearly balance sheet are to be specially shown. Both returns must specify the contingent liabilities upon inland bills of exchange which have passed into other hands.

§ 9. Banks whose note circulation exceeds the amount of their cash, and the amount assigned to them in the subjoined list,¹ must after January 1, 1876, pay yearly to the Imperial Treasury on the excess a tax of 5 per cent. In calculating the tax the following items are to be reckoned as cash: Current German money,² Imperial Treasury notes [*Reichskassenscheine*], notes of other German banks, and gold bars or foreign gold coins calculated at the rate of 1392 marks to the pound. If a bank lose the right of issuing notes (§ 49), its share in the right of issue of uncovered notes not subject to taxation falls to the Reichsbank.

§ 10. For the purpose of computing the amount of the tax, the administration of the bank has to make out a statement on the 7th, 15th, 23rd, and the last day of each month of the cash and notes outstanding of the bank, and submit this statement to the Imperial Chancellor. At the close of every year the controlling authorities will, upon the basis of these statements, fix the amount of tax to be paid by each bank, as follows: $\frac{1}{4}\frac{1}{8}$ per cent. of the surplus of uncovered notes subject to the tax, as fixed in each of the different statements, is to be calculated as part of the tax; and the total of these separate

¹ Cf. *U. S. National Monetary Commission*, No. 574, p. 91.

² By Act of June 1, 1909, "German money" was changed to "German gold coins."

tax debits is the amount of tax which the bank has to pay to the Imperial Treasury at the latest on the 31st of January of the year following.

§ 11. [Foreign bank-notes or obligations issued to bearer are not acceptable means of payment, even if issued, either exclusively or along with another valuation, in the currency of the Empire or a German State.]

TITLE II—REICHSBANK

§ 12. Under the control and direction of the Empire, a bank will be established, bearing the name of "Reichsbank," which possesses the quality of a legal *persona*, and has the function of regulating the monetary circulation in the whole of the German Empire, facilitating the settlement of payments, and putting available capital into effective use. The Reichsbank has its head office in Berlin. It is authorized to establish branches in any place in the Empire. The Federal Council may order the establishment of such branches in designated places.

§ 13. The Reichsbank is empowered to transact the following kinds of business:

1. To buy and sell gold and silver coin and bullion.

2. To discount, buy, and sell bills of exchange, whose maturity does not exceed three months, and which are guaranteed usually by three, but at least by two, solvent persons; also obligations of the Empire, of any German State, or domestic municipal corporations, which are redeemable at their face value at the latest in three months.

3. To make loans bearing interest for not longer than three months against the pledge of transferable property (Lombards), as follows:

- a) Gold and silver, coined or uncoined;

- b) Obligations of the Empire, of a German State, or of a domestic municipal corporation, payable to bearer, which bear interest or fall due at the latest within a year; or obligations bearing interest, payable to bearer, whose interest is guaranteed by the Empire or a German State; fully paid shares, preference shares, prior-lien bonds, of German railway companies whose lines are in active operation; mortgage bonds of German joint-stock banks or coöperative mortgage banks, standing under the control of provincial, municipal, or any other State authority, at a valuation of not over three-fourths of their market worth;

- c) Foreign obligations, bearing interest, payable to bearer, and foreign prior-lien railway obligations having a State guaranty, at not over 50 per cent. of their market value;

- d) Bills of exchange, endorsed by persons of recognized standing, at a margin of at least 5 per cent. below their market value;

- e) Pledges of merchandise stored within the country, at not over two-thirds of their value.

4. To buy and sell securities under the conditions stated in 3, b). The instructions of the Directorium of the Reichsbank (§ 26) to determine what proportion of the working capital shall be invested in such securities.

5. To collect funds for the account of private persons, establishments, or officials; to make payments upon funds in hand; and to provide checks or drafts on their branches or correspondents.

6. To buy for outside account securities of any kind, or the precious metals, from funds in hand, and to sell them on due delivery.

7. To accept money, yielding interest or not, on account of deposits, or for transfer account [*Giroverkehr*], the total interest-bearing deposits not to exceed the capital and surplus of the bank.

8. To accept the charge and management of valuable goods.

§ 14. The Reichsbank is obliged to exchange its notes for gold bullion at the fixed rate of 1392 marks for a pound fine. The bank is entitled to have such gold assayed by experts appointed by itself at the expense of the one presenting it.

§ 15. The Reichsbank must publish the rate at which it discounts (§ 13. 2) or makes an advance on interest (§ 13. 3). [Returns for each week are based on the records of the bank and its branches.]

§ 16. The Reichsbank has the right to issue bank-notes according to the needs of its business. [Fabrication, emission, withdrawal and destruction of notes are under the Imperial Debt Commission of the Empire.]

§ 17. The Reichsbank is obliged to hold in its vaults as cover at least one-third of the amount of its notes outstanding in current German money, Imperial Treasury notes [*Reichskassenscheine*], gold bars or foreign coins, reckoned at 1392 marks to the pound; and to hold as cover for the rest discounted bills of exchange which have a maturity of not over three months, and for which as a rule three, or at the least two, persons of known solvency are guarantors.

§ 18. The Reichsbank is obliged to redeem its notes on presentation in current German money to bearer (a) at its head office in Berlin; (b) at its branches, so far as its means and the need of money permit.

§ 19. The Reichsbank is obliged to receive in payments at their full face value the notes of the banks designated by the Imperial Chancellor, according to the instructions in § 45 of this Act, not only in Berlin, but also at its branches in cities having more than 80,000 inhabitants, or at the site of the bank which has issued the notes, so long as the issuing bank strictly observes the rules for the redemption of its notes. The bank-notes thus received must either be presented for redemption, or in payments to the bank itself, or used for payments in the place where the bank has its head office.

The Reichsbank is empowered to make agreements with other German banks regarding the renouncing of their right to issue notes.

§ 20. If the debtor on a Lombard loan (§ 13. 3) should default, the Reichsbank is authorized, without an order of the Court, to sell publicly the collateral through one of its officials or through an official duly qualified as an auctioneer; or should the collateral be quoted on the Bourse or market, the sale may be made privately through an official, or a broker, or, in the lack of the latter, by a duly qualified auctioneer, at the ruling price; and from the proceeds to reimburse itself for the principal, interest and expenses. The bank retains this right also prior to other claimants and upon all the assets of the debtor.

§ 21. The Reichsbank and its branches throughout the Empire are exempt from duties and income taxes.

§ 22. The Reichsbank is obliged, free of charge, to receive payments for the account of the Empire, and to make payments to the full extent of the funds of the Empire. It is empowered to undertake the same business for the German States.

§ 23. The capital¹ of the Reichsbank consists of 120 million marks, divided into 40,000 shares of 3,000 marks each, registered in the names of the owners. The shareholders are not held personally liable for the liabilities of the Reichsbank.

§ 24. The net earnings of the Reichsbank at the end of the year are to be thus disposed of:

1. First, a regular dividend to the shareholders of $4\frac{1}{2}$ per cent.² reckoned on the capital.

2. From the residue a sum of 20 per cent. to be carried to the reserve fund [surplus] until it has reached one-fourth of the capital.

3. Of any remaining balance one-half is to be paid to the Imperial Treasury, and one-half to the shareholders, provided the total dividend to the shareholder does not exceed 8 per cent. From any remainder the shareholders receive one-quarter, the Imperial Treasury three-quarters. Should the net earnings not amount to $4\frac{1}{2}$ per cent. of the capital, the deficiency is to be made up from the surplus.

If the shares of the Reichsbank are issued at a premium, the gain goes to the surplus.

Postponed dividends, after running four years, dating from the day of maturity, become outlawed in favor of the bank.

§ 25. The control over the Reichsbank vested in the Empire will be exercised by a Bank-Kuratorium, which consists of the Imperial Chancellor as chairman, and four members. One of these members is named by the Emperor, the three others by the Federal Council.

¹ By the Statute of May 21, 1875, and by the Act of June 7, 1899, an additional capital of 60,000,000 marks was added.

² By the Act of June 7, 1899, the regular dividend was changed to $3\frac{1}{2}$ per cent.

The Kuratorium meets once a quarter. At these meetings a report upon the condition of the bank and all matters relating thereto, and a general statement of the accounts of all operations of the bank and the regulations pertaining thereto, shall be submitted.

§ 26. The direction of the bank vested in the Empire will be exercised by the Imperial Chancellor, and under him by the Directorium of the Reichsbank; in case the Imperial Chancellor is prevented from exercising this duty, the direction will be taken over by a substitute named by the Emperor.

The Imperial Chancellor directs the whole administration of the bank in accordance with the provisions of this Act and of those to be announced thereunder (§ 40). He publishes the regulations for the conduct of business by the Directorium and the branches, as well as the instructions for the officials of the bank; and he is empowered to make any desired changes in existing regulations and instructions.

§ 27. The Directorium is the administrative and executive authority by which the Reichsbank is officially represented. It consists of a president and a certain number of members, it reaches its decisions by a majority vote, and in its administration it is entirely subject to the instructions and directions of the Imperial Chancellor. The president and members of the Directorium of the Reichsbank are appointed for life by the Kaiser on the nomination of the Federal Council.

§ 28. [Officials of the bank are imperial functionaries; salaries, pensions, etc., to be borne by the bank; salaries, etc., of the Directorium are fixed by the yearly imperial budget; of others by the Emperor, with the agreement of the Federal Council, on the advice of the Chancellor. No official to hold shares.]

§ 29. [Accounts are submitted to the Court of Accounts, or *Rechnungshof*, of the empire; their form to be determined by the Chancellor, but the Court of Accounts to be consulted as to the directions therefor.]

§ 30. The shareholders have a share in the administration of the Reichsbank through a general assembly, acting through a standing committee (Centrallausschuss) chosen out of their number, and in accordance with the following rules:

§ 31. The Centrallausschuss is the permanent representative of the shareholders in matters of administration. It consists of fifteen members, and in addition fifteen alternates are chosen. The members and alternates should be elected from the list of those shareholders holding at least three shares in their name. All members and alternates must be resident within the Empire, and at least nine members and nine alternates in Berlin. One-third of the members retire annually, but are eligible for re-election.

The Centralausschuss meets under the chairmanship of the president of the Directorium at least once a month, and extraordinary meetings can be called. The quorum consists of seven members; the instructions will determine in what cases and in what order the alternates are to be called.

§ 32. To the Centralausschuss will be submitted each month the weekly statements on the condition of discounts, bills of exchange, Lombards; of the note circulation, cash reserves, deposits; purchase and sale of gold, bills, and securities; the distribution of funds to the branches; the results of the regular and special examinations of the cash; as well as the views and proposals of the Directorium concerning the course of business in general and any needful regulations.

The Centralausschuss is especially asked to give its opinion on the following:

a) The balance and earnings, which will be drawn up at the end of the business year by the Directorium, to be laid with their opinion before the Chancellor for his final approval, and then to the shareholders in their regular assembly.

b) [Changes in salaries and pensions (§ 28).]

c) The filling of vacancies in the Directorium, with the exception of president, before the final decision by the Federal Council (§ 27).

d) The maximum of funds to be loaned on Lombards.

The purchase of securities for the account of the bank can be accommodated to the maximum of the bank's funds to be employed for this purpose only with the approval of the Centralausschuss.

e) The rate of discount, and that on Lombards, together with possible changes in the principles and maturities of credit operations.

f) Arrangements with other German banks (§ 19) and the principles to be followed in these relations. General business regulations and instructions to officials are to be communicated to the Centralausschuss as soon as they are published (§ 26).

§ 33. The members of the Centralausschuss draw no salary.

If a member of the Assembly [*Ausschuss*] betrays a bank secret (§ 39) which has come to him in his official position, or has in any other way lost public confidence, or if through him the interest of the institution is endangered, the general assembly is empowered to sever his connection with it.

A member of the Assembly who has become bankrupt, who has been absent from meetings for a half-year, or has lost his eligibility (§ 31) is to be regarded as no longer a member.

§ 34. The permanent special control over the management of the Reichsbank is to be exercised by three deputies, chosen by the Centralausschuss from the list of its own members for one year, for whom respectively three alternates shall likewise be chosen. The business

regulations shall state in what cases and in what order the alternates shall be called.

The deputies are given the special right to attend all the meetings of the Directorium and join in the discussions.

They are further empowered and obliged, in the customary hours of business and in company with a member of the Directorium, to make themselves acquainted with the course of business, to inspect the books and the portfolios of the bank, and to be present at the regular and special examinations of the bank. As to their findings they are to report at the monthly meeting of the Centralausschuss.

A deputy may be suspended by the Centralausschuss under § 33, paragraph 2, without waiting for the action of the general assembly.

§ 35. Dealings with the Finance Administration of the Empire or of the German States must be carried on only within the restrictions of this Act and the Bank Statutes, and, if any transactions should not fall under the general nature of the bank's operations, they must be brought to the attention of the deputies, and, if only one of them objects, they must be laid before the Centralausschuss. If the latter in a definitive meeting does not accept them as permissible by a majority vote, the dealings cannot be carried through.

§ 36. Besides the location of the head office of the bank, the Federal Council is to determine the larger places where the chief offices of the Reichsbank are to be established, which come under the control of a management consisting of at least two members, subordinate to a Bank Commissioner appointed by the Emperor.

For each chief office of the Reichsbank, where there are a sufficient number of shareholders, there should be a district [*Bezirk*] committee whose members are chosen by the Imperial Chancellor from a list of shareholders furnished by the Bank Commissioner and the Centralausschuss, and whose residence must be in the place of the chief office or in its immediate neighborhood. To this committee will be communicated at its regular monthly meetings the reports on the business of the chief offices of the bank and the general regulations issued by the central administration. Proposals or motions of the district committee which are not approved by the management are to be presented by the latter to the Chancellor in a report.

The permanent special control over the business of the chief offices of the bank, according to the regulations in § 34, so far as it does not interfere with the daily course of business, is to be exercised by two or three deputies, chosen from its own membership by the district committee; or, if there is no district committee, one is to be appointed by the Chancellor according to paragraph 2.

§ 37. The establishment of branches [*Reichsbankstellen*] elsewhere, if they are directly under the control of the Directorium, is in the

hands of the Chancellor; if they are under the control of another branch [*Zweiganstalt*], in the hands of the Directorium.

§ 38. [The bank is responsible for the signatures of those acting for the bank, even if specially authorized; they are made by two members of the Directorium. Suits must be brought against any one of the offices of the bank in the place where it is situated.]

§ 39. Every official in the administration of the bank, member of a committee, or deputy, are obliged to keep silence regarding any individual transaction of the bank, especially that with private persons and the credit awarded to them. Deputies of the Centralausschuss and their alternates, as well as the officials of the chief offices of the Reichsbank, before entering on their duties, must bind themselves to this observance by a clasp of the hand instead of an oath.

§ 40. [The statutes, according to §§ 12-39, should be published, concerning technical details of shares, coupons, transfers, cancellation, dividends, yearly balance-sheet, meetings, voting (no one person having over 100 votes), elections of committees, public announcements, liquidation of the bank (§ 41), collection of original capital, and conditions of sale and purchase of securities.]

§ 41. The Empire has the right, on January 1, 1891, and at every ten years thereafter, on one year's previous notice, by imperial decree, in agreement with the Federal Council, delivered by the Chancellor to the Directorium, and by it published, to

a) abolish the Reichsbank established by this Act, and to acquire the real estate of the same at its value on the books of the bank, or
b) acquire all the shares of the Reichsbank at their face value.

In both cases, the remaining surplus, not required to cover losses, goes one-half to the shareholders, and the other half to the Empire.

For the extension of the term, according to the intent of the first paragraph, the approval of the Reichstag is necessary.

TITLE III—PRIVATE NOTE-BANKS

§ 42. [Banks already having the right to issue notes are confined to business within the state which granted the right.]

§ 43. [Notes of such banks not receivable in other states.]

§ 44. [Banks are freed from § 43 if they fulfil by January 1, 1876, the following conditions: (1) To invest by January 1, 1877, not to exceed one-half their capital and surplus, in business described in § 13, 1-4 (especially 4), and publish its rates on discounts and Lombards; (2) to set aside 20 per cent from profits above 4½ per cent until surplus reaches one-fourth of capital; (3) to keep the same cover for its notes as the Reichsbank (one-third cash, two-thirds commercial paper); (4) to redeem its notes in Berlin or Frankfort; (5) to accept all other privileged bank-notes at par; (6) not to object to right of issue granted

to other banks, nor if its notes are refused at public offices; (7) to have its right of issue terminated by the Federal Council, as in § 41, without compensation, to provide for uniformity of issues.

Banks fulfilling the above conditions may, with the consent of the Federal Council, be freed from § 42. If their notes do not exceed their capital, banks are freed from condition (2), and do business in the whole empire. The Federal Council may mitigate condition (1).]

§ 45. [Banks wishing to comply with § 44 must prove: (1) That their statutes comply; (2) that the redemption offices have been established. Then the Chancellor will publicly announce their acceptance.]

§ 46. [This Act to be regarded as notice of termination, in case the right to issue may be stopped. Statutes are hereby repealed which make the right dependent on the note-issues of the Prussian Bank.]

§ 47. Any change in the fundamental law, the statutes, or privileges, of a bank, which already possesses the right to issue notes, must, so long as this authority exists, be submitted to the approval of the Federal Council, if it concerns the capital, the surplus, its field of business, the cover of its outstanding notes, or the duration of its privilege to issue notes. Directions and concessions of the States which limit a bank's operations regarding discounts, Lombards, securities and deposits, and which are not contained in this Act, are not prohibited.

The approval of the request for the additional requirement is to be obtained through the Government of the State concerned; but it must be refused, if the bank has not complied with the provisions of § 44.

[The Bavarian Government is empowered to extend the issues of the Bavarian Note-Bank to the maximum of 70,000,000 marks; or it can bestow this authority on any other bank if it complies with § 44.]

§ 48. [The Chancellor is given authority to examine the books and cash of a bank having the right to issue notes, at any time, to ascertain if it is complying with the law, or with §§ 42 and 43, and as to the accuracy of the statements (§ 8) or the reports on which taxation is based (§ 10). The rights of control by the several states is not interfered with.]

§ 49. [The right of issue is lost, by (1) the close of the period for which it was granted; (2) renouncing the right; (3) bankruptcy; (4) verdict of a court; or (5) the regulations of a state.]

§ 50. [The right of issue can be taken away by a court, on the suit of the Chancellor or a German state, if (1) the rules as to cover or the amount of the notes have been violated; (2) §§ 42 and 43 have not been followed, in the period before the Chancellor's publication in § 45; (3) redemption has not been strictly carried out; (4) capital

has been impaired by one-third. Such suits come under the commercial provisions of the Imperial Code of Law. The verdict must order the withdrawal of all notes in circulation.]

§§ 51, 52, 53. [Details for carrying out the judgment of the court.]

§ 54. [Corporations, not being banks, but having the right to issue notes, bonds, or obligations, without interest, payable to bearer, must conform to the conditions in §§ 2-6, 43, and 47, so long as they have paper money in circulation.]

IV—PENAL DIRECTIONS

§§ 55-59. [Relate to penalties for violation of the Act.]

V—CONCLUSION

§ 60. [§§ 6, 42, 43, and penal clauses of §§ 56 and 58, come into force January 1, 1876.]

§ 61. [Details of the arrangement by which the Prussian Bank is to be ceded to the empire and merged into the Reichsbank: (1) Prussia withdraws the capital (1,906,800 marks) and one-half the surplus, and cedes its rights on following conditions: (2) empire to pay an indemnity of 15,000,000 marks; (3) one share of old for one of new; (4) or, return old capital and due proportion of surplus to old shareholders; (5) Reichsbank to assume liability for Prussian loan of 16,589,000 marks, under the treaty of January 28-31, 1856; (6) agreement to be made on value of real estate.]

§ 62. [Chancellor to put out Treasury bills (*Schatzanweisungen*) at interest to the amount of shares not issued, to obtain the necessary capital (§ 23).]

§§ 63-66. [These Treasury notes to be prepared by the Prussian administration of the debt; the rate of interest to be fixed by the Chancellor; to be redeemed from revenues of the empire; to be issued through the Imperial Treasury; interest postponed four years, or capital payments postponed thirty years, become outlawed. Inscription in the commercial register not required of the Reichsbank.]

B

ACT ALTERING THE BANK ACT, AUGUST 4, 1914

§ 1. §§ 9 and 10 of the Bank Act are suspended for the Reichsbank.

§ 2. Satisfactory bills of exchange which are endorsed by the Empire and have a maturity of not over three months, even if they have no other guarantee, meet the requirements of § 13, No. 2, and § 17 of the Bank Act.

§ 3. Obligations of the Empire which are payable at par within three months hold the same position, in the meaning of § 17 of the Bank Act, as the aforesaid bills of exchange.

§ 4. [Federal Council to fix the date when this Act goes into effect.]

C

SUPPLEMENT TO REGULATIONS OF THE IMPERIAL DEBT,
AUGUST 4, 1914

§ 1. As a means for securing credit to defray the temporary extraordinary expenses of the Empire, and thereby to enlarge the ordinary funds of the Imperial Treasury, means of payment may be provided, within the limits of the legal requirements (§ 1 of the Regulation of the Imperial Debt), by the issue of bills of exchange.

§ 2. The bills of exchange shall be drawn at the order of the Imperial Chancellor by the Administration of the Imperial Debt with the signature of two of its members. In so far as the rules governing bills of exchange do not forbid, these bills are covered by the same Imperial Debt regulations as those applying to Treasury bills [*Schatzanweisungen*] in the terms of the Act of February 22, 1904. (R. G. B., p. 66.)

§ 3. The bills issued by the Empire are free from the stamp duties on bills.

§ 4. The Federal Council is empowered to fix the date when this law shall no longer be in force.

§ 5. [Act goes into effect when promulgated.]

D

ACT MODIFYING THE MINT ACT, AUGUST 4, 1914

§ 1. Until further notice the provisions of § 9, Sec. 2, paragraphs 2 and 3,¹ of the Mint Act of June 1, 1909 (R. G. B., p. 507) are hereby changed so that Imperial Treasury notes [*Reichskassenscheine*] and Reichsbank notes may be delivered instead of gold coin.

§ 2. [The Federal Council to fix the date when the original order shall be restored.]

§ 3. [Act in force on promulgation.]

¹ § 9. No one is compelled to accept in payments silver coins to an amount greater than 20 marks, nor nickel or copper coins to a greater amount than 1 mark.

Silver coins will be accepted in any sums by the treasuries of the Empire or of the States. The Federal Council designates those offices which will pay on demand gold coins on presentation of silver coins in sums of not less than 200 marks, or of nickel or copper coins in sums of not less than 50 marks. It also fixes the detailed conditions for the exchange.

E

DARLEHNSKASSEN ACT [REICHSGESETZBL., P. 340]

AUGUST 4, 1914

§ 1. In Berlin and those places within the Empire, in which there is a branch or agency of the Reichsbank, shall be established wherever necessary, on the order of the Imperial Chancellor, according to the report of the Committee on Trade and Commerce of the Federal Council [*Bundesrath*], Loan Bureaus [*Darlehnskassen*] for the purpose of making loans on security to meet the need of credit, especially in the interest of trade and industry.

Subsidiary branches of the Darlehnskassen may be established in other than the designated places to aid in the work of lending and of building up depots.

§ 2. For the full amount of the loan granted shall be paid out a special form of money known as "Darlehnskassenscheine." These notes shall be received at their full face value in payment at all the Imperial offices as well as at all the public offices of the States of the Empire; in private transactions they shall not be a compulsory means of payment.

In the meaning of §§ 9, 17 and 44 of the Bank Act of March 14, 1875, the notes of the Loan Bureaus stand on the same footing as the Reichskassenscheine [Imperial Treasury notes].

The total amount of the notes of the Loan Bureaus shall not exceed 1500 million marks. The Federal Council is empowered in case of necessity to raise the amount of notes outstanding.

No notes of Loan Bureaus shall be issued by the management of the Loan Bureaus (§ 13) for which sufficient security, as fixed by §§ 4 and 6, shall not be provided.

Before their issue, an exact description of the notes shall be made public by the management of the Loan Bureau.

§ 3. Loans can be given for not less than 100 marks, and shall not run as a rule for a longer term than three, and only in exceptional circumstances for six, months.

§ 4. The security may consist of:

a) The pledge of industrial, agricultural and mineral products and non-perishable merchandise, stored within the limits of the Empire, as a rule, for one-half, or in exceptional cases, for two-thirds of their value, according to differences of circumstances and salability.

b) The pledge of securities issued by the Empire, or by the government of a German State, or those conforming to legal requirements issued by corporations, joint-stock companies, or limited partnerships, which are located within the Empire, at a reduction from their current

or market price. Paper not running in the name of the bearer must be transferred to the Loan Bureaus.

c) The pledge of other securities which the management (§ 13) declare to be satisfactory.

For the fulfillment of the pledge of articles mentioned in a) it suffices, instead of actual delivery, to indicate the pledge clearly by some external mark, such as a tablet or the like.

§ 5. Commodities which are subject to serious changes of price will be accepted as pledge only if a third solvent person guarantees the payment of the loan.

§ 6. A loan may also be protected by the pledge of claims, which have been entered in the Imperial Debt Records [*Reichsschuldbuch*] or in that of a German State, at a reduction from the current value determined according to the face value and the rate of interest of the obligations corresponding to the pledged claims.

In case a mortgage on a claim of the sort mentioned in the first paragraph be inscribed on the records in favor of the Loan Bureau, it is sufficient to have the attestation of two members of the Board of Directors.

As to the attestation, the regulations of § 183 of the Act concerning matters of voluntary jurisdiction have like application.

§ 7. If a mortgage to a Loan Bureau has been entered on the records (§ 6), the Bureau thereby acquires a right, even if a third person has a claim on it, prior to the rights of that third person; unless the right of the third person had been entered at the time of the inscription of the mortgage on the records; or was known at that time to the Bureau; or was not known because of gross negligence.

If the debtor has delayed meeting the obligation secured by the pledge, the Administration of the Debt Records is thereby empowered and obliged, on a written request of the Loan Bureau, without requiring any proof of the delay, to issue obligations payable to bearer to liquidate the whole or a corresponding part of the claim; unless an order of the court intervenes which forbids the payment to the Loan Bureau; or unless same right of a third person, or a limitation of the mortgage in favor of the third person has been recorded, which was entered earlier than the pledge in favor of the Loan Bureau.

The Administration of the Records must inform the Loan Bureau of later entries affecting the adequacy of the obligation.

As to the satisfaction of the Loan Bureau regarding the obligations discharged by the Administration of the Debt Records, the regulations of §§ 10, 11 have corresponding application.

§ 8. The rate of interest on a loan granted shall as a rule not be higher than the published rate at which the Reichsbank buys bills of exchange



§ 9. The security should suffice for the principal, interest, and expenses; these secondary claims should be deducted from the sum of the loan.

§ 10. If payment is not made at maturity, the Loan Bureau may sell the security through one of its officials or a broker and reimburse itself out of the proceeds. The Loan Bureau shall dispose of the security only to the highest bidder in the open market.

§ 11. Also, if the debtor should go into bankruptcy, the Loan Bureau retains the right to sell the security without an order of the Court. [§ 127, Sec. 2, of the Bankruptcy Act of May 20, 1898, does not apply.]

§ 12. The Loan Bureaus form independent institutions with the attributes and rights of a legal *persona*. Their business enjoys freedom from stamps and duties.

§ 13. The Reichsbank assumes the management of the Loan Bureaus under the direction of the Imperial Chancellor in the interest of the Empire, but quite apart from its other business. The general administration shall be established in Berlin in a special bank department known as the "Hauptverwaltung der Darlehnskassen" according to more detailed directions given by the Imperial Chancellor. In addition, there shall be appointed for each Loan Bureau a Special Board of Directors subordinate to the Hauptverwaltung, to which shall be appointed by the Imperial Chancellor a representative of the Empire as well as members from the commercial or industrial classes. The Imperial Chancellor issues instructions for the conduct of the business of the Loan Bureaus.

§ 14. The opening of the Loan Bureaus is to be brought to general attention over the names of the imperial representative and the members of the Board of Directors through the journals designated for official notices.

§ 15. Two of the members of the Board of Directors chosen from the commercial or industrial classes shall, in alternate weeks, manage the business of the Loan Bureaus and see that the provisions of this Act are observed.

§ 16. The imperial representative must keep informed of the whole business of the Bureau and has a right of veto upon all applications for loans. The determination of the reduction to be made from the current or market price of the securities pledged, within the limits set by the regulations of the business, rests with the imperial representative after receiving the advice of the Board of Directors.

§ 17. The profits of the Loan Bureaus, after deducting the expenses of administration, shall be applied to covering any possible losses and to the future redemption of the notes of the Bureaus. Any possible surplus goes to the Imperial Treasury.

§ 18. The notes of the Loan Bureaus shall be issued in denominations of 5, 10, 20 and 50 marks. The issue of larger denominations of the notes, and the proportions in which the various denominations are to be used, will be determined by the regulations of the Imperial Chancellor. [Under this provision, and by Act of August 31, 1914, denominations of 1 and 2 marks were issued.]

The notes of the Loan Bureaus shall be issued by the Administration of the Imperial Debt [*Reichsschuldenverwaltung*], within the maximum limits (§ 2, Paragraph 3), according to the orders of the Imperial Chancellor given to the Administration-in-Chief of the Loan Bureaus, which assumes the responsibility for the issue.

The control over the preparation and issue of the notes of the Loan Bureaus is exercised by the Commission on the Imperial Debt.

The Imperial Chancellor is to make public monthly the amount of the notes of the Loan Bureaus outstanding.

§ 19. As soon as the need for a Loan Bureau no longer exists, the Imperial Chancellor is to close it up and make public the fact.

On the return of peace, the notes of the Loan Bureaus, issued by virtue of this Act, shall be withdrawn according to the detailed instructions of the Federal Council.

§ 20. [§§ 146-149, 151, 152, and 360, Numbers 4-6, of the criminal law apply to these notes.]

§ 21. The advances on securities [Lombards] granted by the Reichsbank, in the period from August 3, 1914, to the establishment of the Loan Bureaus, on other securities than those mentioned in § 13, No. 3, of the Bank Act [March 14, 1875], are hereby ratified.

§ 22. This law goes into effect on the day of its promulgation.

APPENDIX IV

UNITED STATES

A

AN ACT

TO AMEND SECTION TWENTY-SEVEN OF AN ACT APPROVED DECEMBER TWENTY-THIRD, NINETEEN HUNDRED AND THIRTEEN, AND KNOWN AS THE FEDERAL RESERVE ACT.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section twenty-seven of the Act approved December twenty-third, nineteen hundred and thirteen, known as the Federal Reserve Act is hereby amended and reenacted to read as follows:

“SEC. 27. The provisions of the Act of May thirtieth, nineteen hundred and eight, authorizing national currency associations, the issue of additional national-bank circulation, and creating a National Monetary Commission, which expires by limitation under the terms of such Act on the thirtieth day of June, nineteen hundred and fourteen, are hereby extended to June thirtieth, nineteen hundred and fifteen, and sections fifty-one hundred and fifty-three, fifty-one hundred and seventy-two, fifty-one hundred and ninety-one, and fifty-two hundred and fourteen of the Revised Statutes of the United States, which were amended by the Act of May thirtieth, nineteen hundred and eight, are hereby reenacted to read as such sections read prior to May thirtieth, nineteen hundred and eight, subject to such amendments or modifications as are prescribed in this Act: *Provided, however,* That section nine of the Act first referred to in this section is hereby amended so as to change the tax rates fixed in said Act by making the portion applicable thereto read as follows:

“National banking associations having circulating notes secured otherwise than by bonds of the United States, shall pay for the first three months a tax at the rate of three per centum per annum upon the average amount of such of their notes in circulation as are based upon the deposit of such securities, and afterwards an additional tax rate of one-half of one per centum per annum for each month until a tax of six per centum per annum is reached, and thereafter such tax of six per centum per annum upon the average amount of such notes: *Provided further,* That whenever in his judgment he may deem

it desirable, the Secretary of the Treasury shall have power to suspend the limitations imposed by section one and section three of the Act referred to in this section, which prescribe that such additional circulation secured otherwise than by bonds of the United States shall be issued only to National banks having circulating notes outstanding secured by the deposit of bonds of the United States to an amount not less than forty per centum of the capital stock of such banks, and to suspend also the conditions and limitations of section five of said Act except that no bank shall be permitted to issue circulating notes in excess of one hundred and twenty-five per centum of its unimpaired capital and surplus. He shall require each bank and currency association to maintain on deposit in the Treasury of the United States a sum in gold sufficient in his judgment for the redemption of such notes, but in no event less than five per centum. He may permit National banks, during the period for which such provisions are suspended, to issue additional circulation under the terms and conditions of the Act referred to as herein amended: *Provided further*, That the Secretary of the Treasury, in his discretion, is further authorized to extend the benefits of this Act to all qualified State banks and trust companies, which have joined the Federal reserve system, or which may contract to join within fifteen days after the passage of this Act."

Approved, August 4, 1914.

B

AN ACT

TO PROVIDE FOR THE ADMISSION OF FOREIGN-BUILT SHIPS TO AMERICAN REGISTRY FOR THE FOREIGN TRADE, AND FOR OTHER PURPOSES.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the words "not more than five years old at the time they apply for registry" in section five of the Act entitled "An Act to provide for the opening, maintenance, protection, and operation of the Panama Canal and the sanitation and government of the Canal Zone," are hereby repealed.

SEC. 2. That the President of the United States is hereby authorized, whenever in his discretion the needs of foreign commerce may require, to suspend by order, so far and for such length of time as he may deem desirable, the provisions of law prescribing that all the watch officers of vessels of the United States registered for foreign trade shall be citizens of the United States.

Under like conditions, in like manner, and to like extent the President of the United States is also hereby authorized to suspend the

provisions of the law requiring survey, inspection, and measurement by officers of the United States of foreign-built vessels admitted to American registry under this Act.

SEC. 3. This Act shall take effect immediately.

Approved, August 18, 1914.

C

AN ACT

TO AUTHORIZE AN ISSUE OF BONDS TO MEET EXPENDITURES FOR THE NATIONAL SECURITY AND DEFENSE, AND, FOR THE PURPOSE OF ASSISTING IN THE PROSECUTION OF THE WAR, TO EXTEND CREDIT TO FOREIGN GOVERNMENTS, AND FOR OTHER PURPOSES.
APRIL 24, 1917.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Treasury, with the approval of the President, is hereby authorized to borrow, from time to time, on the credit of the United States for the purposes of this Act, and to meet expenditures authorized for the national security and defense and other public purposes authorized by law not exceeding in the aggregate \$5,000,000,000, exclusive of the sums authorized by section four of this Act, and to issue therefor bonds of the United States.

The bonds herein authorized shall be in such form and subject to such terms and conditions of issue, conversion, redemption, maturities, payment, and rate and time of payment of interest, not exceeding three and one-half per centum per annum, as the Secretary of the Treasury may prescribe. The principal and interest thereof shall be payable in United States gold coin of the present standard of value and shall be exempt, both as to principal and interest, from all taxation, except estate or inheritance taxes, imposed by authority of the United States, or its possessions, or by any State or local taxing authority; but such bonds shall not bear the circulation privilege.

The bonds herein authorized shall first be offered at not less than par as a popular loan, under such regulations prescribed by the Secretary of the Treasury as will give all citizens of the United States an equal opportunity to participate therein; and any portion of the bonds so offered and not subscribed for may be otherwise disposed of at not less than par by the Secretary of the Treasury; but no commissions shall be allowed or paid on any bonds issued under authority of this Act.

SEC. 2. That for the purpose of more effectually providing for the national security and defense and prosecuting the war by establishing

credits in the United States for foreign governments, the Secretary of the Treasury, with the approval of the President, is hereby authorized, on behalf of the United States, to purchase, at par, from such foreign governments then engaged in war with the enemies of the United States, their obligations hereafter issued, bearing the same rate of interest and containing in their essentials the same terms and conditions as those of the United States issued under authority of this Act; to enter into such arrangements as may be necessary or desirable for establishing such credits and for purchasing such obligations of foreign governments and for the subsequent payment thereof before maturity, but such arrangements shall provide that if any of the bonds of the United States issued and used for the purchase of such foreign obligations shall thereafter be converted into other bonds of the United States bearing a higher rate of interest than three and one-half per centum per annum under the provisions of section five of this Act, then and in that event the obligations of such foreign governments held by the United States shall be, by such foreign governments, converted in like manner and extent into obligations bearing the same rate of interest as the bonds of the United States issued under the provisions of section five of this Act. For the purposes of this section there is appropriated, out of any money in the Treasury not otherwise appropriated, the sum of \$3,000,000,000, or so much thereof as may be necessary: *Provided*, That the authority granted by this section to the Secretary of the Treasury to purchase bonds from foreign governments, as aforesaid, shall cease upon the termination of the war between the United States and the Imperial German Government.

SEC. 3. That the Secretary of the Treasury, under such terms and conditions as he may prescribe, is hereby authorized to receive on or before maturity payment for any obligations of such foreign governments purchased on behalf of the United States, and to sell at not less than the purchase price any of such obligations and to apply the proceeds thereof, and any payments made by foreign governments on account of their said obligations to the redemption or purchase at not more than par and accrued interest of any bonds of the United States issued under authority of this Act; and if such bonds are not available for this purpose the Secretary of the Treasury shall redeem or purchase any other outstanding interest-bearing obligations of the United States which may at such time be subject to call or which may be purchased at not more than par and accrued interest.

Approved, April 24, 1917.

D

DATE ISSUED	AMOUNT OF ISSUE	NAME AND DESCRIPTION OF ISSUE	RATE AT PAR	PRINCIPAL DUE	ISSUE PRICE	ISSUE YIELD
August, 1916	\$250,000,000	UNITED KINGDOM OF GREAT BRITAIN AND IRELAND 5% TWO-YEAR SECURED LOAN GOLD NOTES Direct obligations of the Government—free of all British Taxes, present or future—collaterally secured by deposit with the Farmers Loan & Trust Company of New York, of American, Canadian and Neutral Government and Railway Securities, to the amount of 120% of the Loan, which margin is to be maintained—valuations of collateral by J. P. Morgan & Company—these Notes are redeemable at option of the British Government in whole or part, on thirty days notice, at 101 and Interest on any date prior to 1, September 1917, and at 100½ and Interest on 1, September and on any date thereafter prior to maturity.	5%	1, September, 1918	99 and Interest	5.53%
October, 1916	\$150,000,000	UNITED KINGDOM OF GREAT BRITAIN AND IRELAND 5½% SECURED LOAN GOLD NOTES Direct obligations of the Government—free of all British Taxes, present or future—collaterally secured by deposit with the Guaranty Trust Company of New York, of American, Canadian, Newfoundland, and other Colonial and Foreign Government, Railway and Corporation Securities, to the amount of 120% of the Loan, which margin is to be maintained—valuations of collateral by J. P. Morgan & Company—these Notes are redeemable at the option of the British Government in whole or part, on thirty days notice, as follows:—from 1, November, 1916, to 31, October, 1917 inclusive, at 103 and Interest; from 1, November, 1917, to 31, October, 1918 inclusive, at 102 and Interest; from 1, November, 1918, to 31, October, 1919 inclusive, at 101 and Interest.	5½%	1, November, 1919	99½ and Interest	5.77%
October, 1916	\$150,000,000	UNITED KINGDOM OF GREAT BRITAIN AND IRELAND 5½% SECURED LOAN GOLD NOTES Direct obligations of the Government—free of all British Taxes, present or future—collaterally secured by deposit with the Guaranty Trust Company of New York, of American, Canadian, Newfoundland, and other Colonial and Foreign Government, Railway and Corporation Securities to the amount of 120% of the Loan, which margin is to be maintained—valuations of collateral by J. P. Morgan & Company—these Notes are redeemable at the option of the British Government in whole or part, on thirty days notice as follows:—from 1, November 1916, to 31, October 1917 inclusive, at 105 and Interest; from 1, November 1917, to 31, October 1918 inclusive, at 104 and Interest; from 1, November 1918, to 31, October 1919 inclusive, at 103 and Interest; from 1, November 1919, to 31, October 1920 inclusive, at 102 and Interest; and from 1, November 1920, to 31, October 1921 inclusive, at 101 and Interest.	5½%	1, November, 1921	98½ and Interest	5.85%

January, 1917	\$100,000,000	UNITED KINGDOM OF GREAT BRITAIN AND IRELAND ONE-YEAR 5½% SECURED LOAN CONVERTIBLE GOLD NOTES Direct obligations of the Government—free of all British Taxes, present and future—collaterally secured by deposit with the Bankers' Trust Company of New York of certain Bonds, Stocks, and other Securities of American Municipalities and Corporations, including, among the Corporations, the Canadian Pacific Railway Company, also Bonds and other obligations, (either as maker or guarantor) of the Dominion of Canada, Newfoundland, Canadian Provinces and Municipalities, also Securities of other British Colonies, likewise certain Neutral Countries, including also Securities of certain British Railway Companies, and of the Grand Trunk Railway Company of Canada, to an aggregate value of 120% of the amount of these Notes outstanding, which margin to be maintained—collateral approved by J. P. Morgan & Company—these Notes are convertible at the option of the holder at any time before maturity (if called for earlier redemption at any time including the date of such redemption) into twenty-year 5½% Bonds of the United Kingdom of Great Britain and Ireland, payable 1, February 1937, and not subject to prior redemption, which twenty-year Bonds are also of all British Taxes, present or future—these Notes are redeemable at the option of the British Government upon thirty days' notice at a premium of 1% for each year (or any part) of unexpired life of the Notes, but if so called for redemption may be converted into the twenty-year 5½% Bonds, as previously stated, at any time up to the date of redemption.	5½% 1, February, 1918	99.92 and Interest	6%
January, 1917	\$150,000,000	UNITED KINGDOM OF GREAT BRITAIN AND IRELAND TWO-YEAR 5½% SECURED LOAN CONVERTIBLE GOLD NOTES Direct obligations of the Government—free of all British Taxes, present and future—collaterally secured by deposit with the Bankers' Trust Company of New York of certain Bonds, Stocks, and other Securities of American Municipalities and Corporations, including, among the Corporations, the Canadian Pacific Railway Company, also Bonds and other obligations, (either as maker or guarantor) of the Dominion of Canada, Newfoundland, Canadian Provinces and Municipalities, also Securities of other British Colonies, likewise certain Neutral Countries, including also Securities of certain British Railway Companies, and of the Grand Trunk Railway Company of Canada, to an aggregate value of 120% of the amount of these Notes outstanding, which margin to be maintained—collateral approved by J. P. Morgan & Company—these Notes are convertible at the option of the holder at any time before maturity (if called for earlier redemption at any time including the date of such redemption) into twenty-year 5½% Bonds of the United Kingdom of Great Britain and Ireland, payable 1, February 1937, and not subject to prior redemption, which twenty-year Bonds are also of all British Taxes, present or future—these Notes are redeemable at the option of the British Government upon thirty days' notice at a premium of 1% for each year (or any part) of unexpired life of the Notes, but if so called for redemption may be converted into the twenty-year 5½% Bonds, as previously stated, at any time up to the date of redemption.	5½% 1, February, 1919	99.07 and Interest	6%
October, 1915	\$500,000,000	ANGLO-FRENCH FIVE-YEAR 5% EXTERNAL LOAN The Joint and several obligation of the Government of the United Kingdom of Great Britain and Ireland and the French Republic—free of all present or future British or	5% 15, October, 1920	98 and Interest	5.49%

DATE ISSUED	AMOUNT OF ISSUE	NAME AND DESCRIPTION OF ISSUE	RATE AT PAR	PRINCIPAL DUE	ISSUE PRICE	ISSUE YIELD
July, 1916	\$94,200,000	<p>French Taxes—registered Bonds obtainable in denominations of \$1,000, \$10,000, and \$50,000, and authorized multiples—registered and coupon bonds interchangeable—convertible at holder's option on any date not later than 15, April 1920, or (provided that notice be given not later than 15, April 1920) at maturity, par for par, into 15/25 year joint and several 4½% Bonds of the Government of the United Kingdom of Great Britain and Ireland and the French Republic; such 4½% Bonds will be payable as to Principal and Interest in United States Gold Coin, in New York, free of all present or future French or British Taxes, and will mature 15, October 1940, but redeemable at 100 and Interest, in whole or part, on any Interest date, not earlier than 15, October 1930, upon three months' notice.</p> <p>AMERICAN FOREIGN SECURITIES COMPANY THREE-YEAR 5% GOLD NOTES</p> <p>This Company was organized with a capital of \$10,000,000 paid in at par in cash—the Company in turn, arranged to lend \$100,000,000 to the Government of the French Republic, for which it holds the obligation of the French Government to repay the Principal in three years, together with Interest at a rate more than sufficient to cover the Interest on the Company's Note issue—these Notes are collaterally secured by deposit of American Corporate issues, Suez Canal Shares, Province of Quebec Bonds, and various Government and Government Guaranteed Railway Bonds of several Foreign Countries, to the extent of 190% of the outstanding amount of these Notes, which margin is to be maintained—collateral lodged with the Bankers Trust Company of New York—these Notes subject to redemption in whole or part, at the option of the Company on any Interest date at 101½ and Interest on 1, February 1917; or at 101 and Interest on 1, August 1917, or 1, February 1918; or at 100½ on 1, August 1918, or 1, February 1919—Principal and Interest payable without deduction for any Taxes, present or future, except any United States Federal Income Tax.</p>	5%	1, August, 1919	98 and Interest	5.75%
March, 1917	\$100,000,000	<p>GOVERNMENT OF THE FRENCH REPUBLIC TWO-YEAR 5½% SECURED LOAN CONVERTIBLE GOLD NOTES</p> <p>Direct obligation of the Government—free of all present and future French Taxes—collaterally secured by pledge with the Central Trust Company of New York, of Securities approved by J. P. Morgan & Co., valued in the aggregate at not less than \$120,000,000, of which approximately \$20,000,000 in value is to consist of Securities of American Corporations and Municipalities (including Securities of the Canadian Pacific Railway Company), and the remainder is to consist of obligations (either direct or through guaranty) of the following Governments: Argentine, Uruguay, Brazil (Funding Loan), Switzerland, Holland, Spain, Egypt, Province of Quebec, Denmark, Norway, and Sweden (including certain Bonds of Mortgage Banks in the last three countries, operated under Government supervision, and quoted customarily on a parity with the</p>	5½%	1, April, 1919	99 and Interest	6.04%

	6%	15, October, 1921	98% and Interest	6% and interest
<p>obligations of their respective Governments); also Bonds of the State of Berne, Switzerland, Bonds of the City of Stockholm, Sweden, and Bonds and Shares of Spanish Railway Companies and of the Suez Canal Company—these Notes are convertible at par upon notice, at the option of the holder at any time before maturity, into twenty-year 5% Bonds of the Government of the French Republic, payable 1, April 1927, and not subject to prior redemption—these twenty-year Bonds are also free of all present and future French Taxes—Principal and Interest of the Notes are also to be payable at the option of the holder in Paris in francs, at the fixed rate of Fcs. 5.75 to the dollar, without deduction for French Taxes. (In connection with the provision for optional collection in francs, it may be noted that this feature amounts to call on French Exchange for two years at a rate of Fcs. 5.75; this being about ten per cent below mint parity. Fcs. 5.18% at or near which figure Exchange ruled prior to the disorganization of Foreign markets brought about by the war. Such additional profit from the Exchange feature as may accrue to the holders of these Notes will involve no increased interest cost to the borrower, but will be consequent upon such improvement in trade and Exchange conditions as may occur during the coming two years.)</p>	<p>6%</p>	<p>15, October, 1921</p>	<p>98% and Interest</p>	<p>6% and interest</p>
<p>October, 1918</p>	<p>\$50,000,000</p>			
<p>CITY OF PARIS (FRANCE) FIVE-YEAR 6% GOLD BONDS (MUNICIPAL EXTERNAL LOAN OF 1916)</p> <p>The only external Loan of the City of Paris—free of all French Governmental or Municipal Taxes, or other French Taxes—redeemable at the option of the City of Paris at 102½ per cent on 15, October 1918, or on any interest date thereafter, on ninety days' notice—principal and interest of this Loan, aside from being payable in New York, are also payable at the option of the holder (to be exercised as to Principal thirty days before the date of maturity or of redemption) in Paris in francs, at the fixed rate of Fcs. 5.50 per dollar—thus, if at the maturity of these bonds, French Exchange should be at the normal rate before the war, the Principal sum payable in France would be approximately \$105 for each \$100 of these Bonds held—the Government of the French Republic undertakes to furnish and permit the exportation of Gold so far as necessary to permit the City of Paris to pay the interest or Principal amount of the Loan in Gold to the City of New York—the purpose of the Loan was "stated to be to reimburse the City of Paris for the very important and unusual expenditures which it had been subjected for more than two years for the alleviation of suffering caused by the war, and to provide for additional similar expenditures, and for other Municipal purposes."</p>				
<p>CITY OF BORDEAUX (FRANCE) 6% THREE-YEAR GOLD BONDS</p> <p>Free of all French Governmental or Municipal Taxes or other French Taxes—only external Loan of Bordeaux—population of City at last census, 261,678—funded debt per capita is approximately \$110—aside from the principal and interest of this Loan being payable in New York, the holder has the option (to be exercised as to Principal thirty days before the date of maturity) of payment in francs in France at the fixed rate of Fcs. 5.60 per dollar, thus, if at the maturity of these Bonds, French Exchange should be at the normal rate before the war, the Principal sum payable in France would be approximately \$108 for each \$100 of these Bonds held—the Government of the French</p>				
<p>November, 1916</p>	<p>\$20,000,000</p>			

DATE ISSUED	AMOUNT OF ISSUE	NAME AND DESCRIPTION OF ISSUE	RATE AT PAR	PRINCIPAL DUE	ISSUE PRICE	ISSUE YIELD
November, 1916	\$20,000,000	<p>Republic is to undertake to furnish and permit the exportation of Gold so far as necessary to permit the City to pay the Interest or Principal amount of the Loan in Gold in New York—this issue made to provide for expenditures for the alleviation of suffering caused by the War, and for other Municipal purposes.</p> <p>CITY OF LYONS (FRANCE) 6% THREE-YEAR GOLD BONDS</p> <p>Free of all French Governmental or Municipal Taxes, or other French Taxes—only external Loan of Lyons—population of the City at last census, 525,796—funded debt per capita is approximately \$72—aside from the Principal and Interest of this Loan being payable in New York, the holder has the option (to be exercised as to Principal thirty days before the date of maturity) of payment in France in Francs at the fixed rate of Francs 5.60 per dollar, thus, if at maturity of these Bonds, French Exchange should be at the normal rate before the War, the Principal sum payable in France would be approximately \$108 for each \$100 of these Bonds held—the Government of the French Republic is to undertake to furnish and permit the exportation of Gold so far as necessary, to permit the City to pay the Interest or Principal amount of the Loan in Gold in New York—this issue made to provide for expenditures for the alleviation of suffering caused by the War, and for other Municipal purposes.</p>	6%	1, November, 1919	98 and Interest	6½%
November, 1916	\$20,000,000	<p>CITY OF MARSEILLES (FRANCE) 6% THREE-YEAR GOLD BONDS</p> <p>Free of all French Governmental or Municipal Taxes, or other French Taxes—only external Loan of Marseilles—population of the City at last census, 550,619—funded debt per capita is approximately \$78—aside from the Principal and Interest of this Loan being payable in New York, the holder has the option (to be exercised as to Principal thirty days before the date of maturity) of payment in France in Francs at the fixed rate of Francs 5.60 per dollar, thus, if at maturity of these Bonds, French Exchange should be at the normal rate before the War, the Principal sum payable in France would be approximately \$108 for each \$100 of these Bonds held—the Government of the French Republic is to undertake to furnish and permit the exportation of Gold so far as necessary, to permit the City to pay the Interest or Principal amount of the Loan in Gold in New York—this issue made to provide for expenditures for the alleviation of suffering caused by the War, and for other Municipal purposes.</p>	6%	1, November, 1919	98 and Interest	6½%
November, 1916	\$25,000,000	<p>IMPERIAL RUSSIAN GOVERNMENT (EXTERNAL LOAN) FIVE-YEAR 5½% TREASURY GOLD BONDS</p> <p>Direct general credit obligation of the Imperial Russian Government—free of all present or future Russian Taxes—principal payable at maturity in New York, also at the holder's option in Roubles at the offices of the Imperial State Bank of Russia at the current commercial rate of exchange in Petrograd, at sight on New York (this option is possessed by no other issue of Russian external or internal debt)—these Bonds when</p>	5½%	1, December, 1921	94.75 and Interest	6½%

October, 1915	\$25,000,000	due and payable as well as the Coupons, when due and payable, will be accepted in payment for all Russian Custom House dues at the value of Gold Dollars at the current commercial rate of exchange in Petrograd, at sight on New York, on the conditions stated in the Russian Statutes governing the collection of Customs—these Bonds are eligible as security for Imperial Russian Government contracts, where deposit is required, at the rate which, according to the Russian law, is fixed and determined by the Minister of Finance of the Imperial Government every six months.	6%	15, October, 1917	100 and Interest	6%
		ITALIAN GOVERNMENT 6% ONE-YEAR CONVERTIBLE GOLD NOTES Exempt from all Italian Taxes—convertible at the holder's option, par for par, into ten-year, 5½% Gold Bonds, payable in United States Dollars, or at the option of the holder in Lire at the rate of 5.18½ Lire per dollar, provided that the holders notify Messrs. Lee, Higginson & Company, of Boston, New York and Chicago, of their wish to convert and present their Notes to be stamped between 15, July and 15, August of 1917—this issue made originally in October 1915, and matured on 15, October 1916; purchasers of the original issue had the right to convert into similar one-year Notes due 15, October 1917; nearly all holders took advantage of this right of conversion; those who did not wish to convert received cash at maturity, and the new Notes were immediately sold to other holders, leaving the original issue of \$25,000,000 still outstanding—purpose of this issue was to finance Italian purchases of merchandise and commodities in United States, and to stabilize Exchange between the two Countries.	6%			
March, 1915	\$5,000,000	GOVERNMENT OF SWITZERLAND 5% GOLD NOTES Direct obligation of the Swiss Confederation—free of all Swiss Taxes—per capita debt of Switzerland approximately \$15—these Notes issued to provide funds for the purchase of commodities in United States.	5%	1, March, 1918	97½ and Interest	6.02%
March, 1915	\$5,000,000	GOVERNMENT OF SWITZERLAND 5% GOLD NOTES Direct obligation of the Swiss Confederation—free of all Swiss Taxes—per capita debt of Switzerland approximately \$15—these Notes issued for the purchase of commodities in United States.	5%	1, March, 1920	96 and Interest	5.93%
October, 1915	\$1,500,000	KINGDOM OF NORWAY 6% GOLD LOAN OF 1914 Issued to supply Norway with credit wherewith to finance purchases of various commodities in United States—per capita debt of Norway approximately \$40.	6%	15, October, 1917	100 and Interest	6%
January, 1916	\$5,000,000	KINGDOM OF NORWAY 6% GOLD BONDS OF 1916 Direct obligation of the Kingdom of Norway, whose full faith and credit are pledged—free of all Taxes now, or hereinafter levied within the Kingdom of Norway—Interest and Principal payable as well in time of War as of Peace.	6%	1, February, 1925	101½ and Interest	5.74%
July, 1915	\$20,000,000	GOVERNMENT OF THE DOMINION OF CANADA 5% GOLD NOTES Direct obligations of the Government—free of all present and future Canadian Government Taxes—these notes are convertible at the option of the holder at any time prior to three months before maturity into twenty-year 5% bonds of the Dominion of	5%	1, August, 1917	99½ and Interest	5.96%

DATE ISSUED	AMOUNT OF ISSUE	NAME AND DESCRIPTION OF ISSUE	RATE AT PAR	PRINCIPAL DUE	ISSUE PRICE	ISSUE YIELD
March, 1916	\$25,000,000	Canada, par for par, which twenty-year bonds mature 1, August 1935, without right of prior redemption and are payable principal and interest in gold coin in New York City, or in Montreal, and to be similarly free of all Dominion of Canada Taxes, including any Canadian Income Tax. GOVERNMENT OF THE DOMINION OF CANADA 5% GOLD BONDS (EXTERNAL LOAN) Direct obligations of the Government—free of all present and future Canadian Government Taxes, including any Canadian Income Tax—fully registered bonds obtainable in denominations of \$1,000 and multiples thereof—coupon and registered bonds interchangeable.	5%	1, April, 1931	99.56 and Interest	5.10%
March, 1916	\$25,000,000	GOVERNMENT OF THE DOMINION OF CANADA 5% GOLD BONDS (EXTERNAL LOAN) Direct obligations of the Government—free of all present and future Canadian Government Taxes, including any Canadian Income Tax—fully registered bonds obtainable in denominations of \$1,000 and multiples thereof—coupon and registered bonds interchangeable.	5%	1, April, 1936	97.19 and Interest	5½%
March, 1916	\$25,000,000	GOVERNMENT OF THE DOMINION OF CANADA 5% GOLD BONDS (EXTERNAL LOAN) Direct obligations of the Government—free of all present and future Canadian Government Taxes, including any Canadian Income Tax—fully registered bonds obtainable in denominations of \$1,000 and multiples thereof—coupon and registered bonds interchangeable.	5%	1, April, 1931	94.94 and Interest	5½%
June, 1916	\$5,000,000	GOVERNMENT OF NEWFOUNDLAND 5% THREE-YEAR GOLD LOAN Direct obligations of the Government of Newfoundland—these bonds comprise the only funded debt of Newfoundland issued outside the British Empire—with the exception of this issue no portion of the funded debt of the Colony matures prior to 1930.	5%	1, July, 1919	99.50 and Interest	5.13%
May, 1915	\$25,000,000	GOVERNMENT OF THE ARGENTINE NATION FIVE-YEAR 6% TREASURY GOLD BONDS Direct obligation of the Government—free of all present and future Argentine Taxes—simultaneously with this issue in New York the Argentine issued £5,000,000 in the London, England, market—both the sterling and the dollar bonds are of substantially similar tenor and content—after 15, May 1917, these sterling and dollar bonds will be interchangeable between London and New York at the fixed rate of \$4.86 per £ sterling, the expense of any new stamps which may be required, to be borne by the holder—	6%	15, May, 1920	99 and Interest	6.24%

November, 1916	\$5,000,000	<p>proceeds of this issue were for the purpose of redeeming certain maturing gold notes and the balance was to be available for further construction expenditures upon the Sanitary Works of Buenos Aires.</p> <p>REPUBLIC OF CHINA 6% THREE-YEAR SECURED GOLD LOAN</p> <p>TREASURY NOTES OF 1916</p> <p>Direct obligation of the Republic of China—secured as to both principal and interest by a first charge upon the entire revenues, derived and to be derived by the Chinese Government, from the Chinese Tobacco and Wine Public Sales Tax, with the declaration by the Chinese Government that said tax would net it during the year 1916 about \$5,840,000 gold and that during each of the years that all or any part of this loan principal or interest is unpaid said tax will amount to a sum equivalent to at least \$5,000,000 gold—these notes are redeemable in whole or part at the option of the Republic of China on 30 days' published notice as follows:—During the first year at a premium of 1% and at any time thereafter at a premium of $\frac{1}{2}$ of 1%—the proceeds of this loan were stated by the Government to be needed for industrial purposes, including the internal development of China, the strengthening of the reserves of the Bank of China and the Bank of Communications (both of which are official banks) and other similar purposes.</p>	6%	1, November, 1919	97½ and Interest	6.92%
-------------------	-------------	---	----	----------------------	------------------------	-------

INDEX

- Acceptance, explained, 71, 82, 280, 345, 346, 359; houses, 70, 72; English, 82, 86, 88, 91, 326.
- Agadir, 152, 154.
- Aldrich-Vreeland notes, 100, n., 299-305.
- Algeciras, 152.
- American Foreign Securities Corporation, 188, n.
- Anglo-French loan, 129, 339, 360.
- Argentina, 154, 307, 316.
- Austria-Hungary, 20, 78, 154, 200, 220, 250, 285; comparative growth of, 14-15; policy of, 37; Bank of, 234.
- Bagdad Railway, 34, 154, 200.
- Balkans, 31, 37, 78; France and, 152-153; wars of, 154-155, 199, 200, 204, 281.
- Bank of England, place in organization of credit, 70, 74; banking reserves of, 75, 102-105; aids stock exchange, 81; saved the day in the crisis, 84, 89; suspension of Bank Act, 87, 88; accounts of, 90; location of reserves in, 103, 329; small notes of, 94, 100; French criticism of, 99; in time of stress, 106; soundness of, 111-114; increase of notes of, 119; little English inflation, 120; superior to Bank of France, 178; compared with Reichsbank, 269.
- Bank of France, 144; notes of, follow discounts, 147-149; function of reserves in, 150; notes *vs.* checks, 162-164, 165; suspension of specie payments, 164, 171; reliance on, in crisis, 165-168; increase of loans, 166-168; reduction of moratorium paper, 168; bank and the bourse, 169-170; vast increase in notes of, 172; advances to state, 173; various limits to note-issues, 174; soundness of, 175; monetary and fiscal confusion, 176; contrasted with Bank of England, 178; effect of retaining gold on, 181; depreciation of notes of, 181-184, 187.
- Bank, Imperial, of Germany, contrasted with Bank of England, 178, 207, 222, 269; control over gold, 203; control over other banks, 204; under imperial control, 205; organization of, 205-206; Kontingent, 207, 227; cover for notes, 207, 227; note-issues of, 208, 230; function of, 208; business of, 209; transfers, 210; lending power widened, 227; loans to government, 228; reserves of, 229; pressure on, 229-232; depreciation of notes, 233, 255; campaign for gold, 234-236; inflation of credit of, 238; suspension of gold payments, 221.
- Banking, reserves, 64, 68, 96, 150, 292; power, 11, 294, 297; assets in Germany, 204-205; foreign, 76; in United States, 11.
- Banks, joint-stock, English, 78, 81, 83, 91, 94, 97, 119; French, 145-147; German, 204, 212.
- Bayer, 19.
- Belgium, 20, 51, 77, 153, 158, 234, 241; German notes in, 232.
- Bill-brokers, 72, 74, 83.
- Bills, *see* Exchange, Treasury.
- Bonn, M. J., 265, n. 1, 267, n. 1, 270, n. 1.
- Bosnia, 154.
- Brazil, 74, 154, 316.
- Bowley, A. L., 107.
- Caillaux, 153.
- Cameroons, 153, n., 154.
- Canada, 102, 103, 109, 329.

- Capital, mobility of, 110; destruction of, 49, 50, 233, 240, 268; and credit, 44.
- Checks, in England, 87, 95, n., 94, 99; in France, 162-164; in Germany, 210, 232; in United States, 11, 62-67, 294.
- Chemistry, 7.
- Chronology of war, 79.
- Clearing-house, 10; banks, 292; loan certificates, 297, 301; in France, 162-164; in Germany, 210-211.
- Coal, 18, 52, 159.
- Combes, 152, n.
- Consumption, superfluous, 46, 48; limiting war, 53; war and, 306; German, 241.
- Cotton, 309-312; Trading Corporation, 310; Pool, 311.
- Coulisse, 156, n., 157.
- Credit, rise of, 10; and war, 39, 84, 283; based on goods, 40, 45, 51, 68, 111, 284; war carried on by, 41, 53; why granted, 41; at a bank, 42; of a government, 43, 114, 133, 137; and capital, 44; and money, 45; of a state depends on productive power, 57, 114; not limited by money, 58, 60-63, 284; a reversion to barter, 60; redemption of, 61; how tested, 63; how affected by imports of gold, 63; supposed break-down of, 64, 69, 80; supersedes money, 67; international, 69; comparative study of, 70, 143, 175; normality of, in war-time, 106, 114; gives time for liquidation, 112; and inflation, 64, 117, 148, 206, 218, 224, 230, 243, 347-353; function of, in a crisis, 161; interdependence of, 279, 280.
- Credit, in England, 70; expansion by Bank of England, 75; suspension of Bank Act, 88; little inflated, 120; normality of, in war, 114; soundness of, 111, 114, 121; as to government borrowing, 133, 137; London as a centre of, 324, 326, 327, 345.
- Credit, in France, 143; organization of, 144, 167; expanded in note-issues, 148; crippled in Balkan wars, 155; in the crisis of 1914, 161, 165; suspension of gold payments, 164; inflation of, 166-168, 172, 173, 175, 176; public and private, 189; and money, 148-149, 176-178, 182, 184.
- Credit, in Germany, weakness of, 200; organization of, 205-213; loan bureaus, 213-218, 264-268; Kriegskredit banks, 218; inflation of, 206, 218, 224, 230, 243; shock to, 220; limit to, 59; solvency of, 241, 242, 244, 265-268; pyramiding of, 266; relation to wealth, 239.
- Credit, in United States, 278; system of, 284, 296; dependence of, on Europe, 279-281; effect of war on, 284, 292, 296; crisis in, 283, 294, 306; inflation of, 347-353, 351; relation of, to prices, 348, 352; working of, 296, 304, 353-361; government, 357, 361; Aldrich-Vreeland notes, 299-305.
- Cuba, 307.
- Curb market, 320, n.
- Currency notes, English, 88, 92-101, 114.
- Darlehnskassen, *see* Loan bureaus.
- Debts, burden of, 56, 134; discount future production, 113; of Great Britain, 133-141; of France, 155, 191-196; of Germany, 258, 261-271, 276; of United States to Europe, 281.
- Denmark, 77, 132, 223, 240, 245, 313, 342.
- Deposit-currency, 10, 11; English origin of, 94; function of, 62-67, 322.
- Destruction, in war, 46, 48, 49, 56; in peace, 47; of capital, 49, 50, 238, 240.
- Discount houses, 72.
- Dyes, 19, 253, 314.
- Education, 8, 9, 26.
- England, *see* Great Britain.
- European War, causes of, 1, 32, 36-38, 199.

- Exchange, bills of, explained, 11, 41, 73, 249, 280, 323, 346; problem of foreign, in England, 121-133, 323-324, 326, 341; shipping-points of, 122, 130, 186, 251, 323; factors affecting prices of, 125, 324, 336; movement of gold from England, 129-131; and depreciation of paper money, 125, 131, 185, 248, 255; on Holland, 132, 252, 342-343; on Scandinavia, 132, 252, 342-344; on Switzerland, 132, 252, 342; French, 184-189, 341; German, 249; American, 283, 292, 319-346; South American, 317-319, 344-346; "Dollar," 317, 344-346; on neutrals, 342-344; on Japan, 344; on Spain, 344.
- Exhaustion, economic, 52; financial, 55; in Germany, 274-276.
- Federal Reserve Banks, 67, 68, 100, 137, n., 293, 299, 300, 303, 315, 337, 349-352, 360.
- Finance bills, 325.
- Finance, public, 54-56; English, 133-142; French, 189-196; German, 257-274.
- Foxwell, H. S., 116, n., 131, n.
- France, comparative growth of, 14, 15; weakness of, 36; private banks of, 145-147; provincial banks of, 147; unprepared for war, 152; German intrigue in, 152, 153; relations with Balkans, 152-153, 155; withdraws capital from Germany, 154; effect of radicalism in, 155; Franco-Prussian War, 16, 36, 156, 181, 204; indemnity of 1871, 156; effect of war on bourse, 156, 157; war and production, 158; suspension of gold payments, 164; hoarding in, 164; moratorium in, 159-162, 164, 165, 167, 168; gold stock in, 171; confusion of monetary and fiscal needs, 176; prices in, 181-183; foreign trade of, 182, 186; foreign exchange of, 184-189, 341; loans in United States of, 188; debt of, 155, 191-196; treasury bills, 191; wealth and income of, 194.
- Franco-Prussian War, 16, 36, 156, 180, n., 181, 204.
- Franklin, E. L., 105, n.
- Freedom of the seas, 31, 35, 36.
- Germany, early, 12, 13; followed in steps of England, 14; progress of, 12, 14, 16-22; causes of progress, 23-29; centralization of industry in, 27; an ally of trade, 28; desire of, for foreign markets, 29-30; trade with England, 30-32; exports of, 26, 31, 244; colonial policy of, 32; hatred of English, 33; hunger for new territory, 34; socialism in, 35; industrial success before the war, 35; militarism, 36; borrowing at home, 51, 269-271; railways of, 52; non-recurring tax of 1913, 152, 201; financial mobilization of, 56; intrigues of, in France, 153; lost French capital on Agadir incident, 154; preparedness of, 198, 200, 205, 213-214; loan bureaux of, 213-218, 264-265; suspension of gold payments, 221; accumulating gold in, 201, 203, 233; war chest of, 202, 229; inflation in, 218, 230, 243, 247; effect of war on bourse, 220; hoarding in, 221; disturbance to industry in, 222-224, 244; prices in, 222, 243-249; trade with United States, 244; war loans of, 231, 258-263, 267; debt of, 59, 258, 261-271; repudiation in, 271, 276; notes of, in Belgium, 232; production of, reduced, 241; income of, 59, 275; wealth of, 238, 275; duration of war, 276; recovery after war, 276.
- Gibson, A. H., 85, n.
- Gide, 179, n.
- Gold, British stock of, 96, n.; in Bank of England, 103; British control of, 103; in various reserves, 102, 234, n. 1; French stock of, 171; German stock of, 201, 203, 231, 234; campaign for, in Germany, 201;

- standard, British, 101; suspension of, payments in various countries, 102, 103; suspension in France, 164, 171; suspension in Germany, 209, n. 2, 221; Pool, in United States, 231-233.
- Great Britain, first with new technic, 13; growth of, 15, 17; trade with Germany, 30, 97, 106; reason for joining in the war, 38; unprepared, 78; foreign investments of, 76; war crisis of, 80; Stock Exchange closed, 81; accepting houses, 72, 88; discount houses, 72; resort to government paper, 88; moratorium in, 86, 91, 109, 111; guaranty to Bank of England, 111; dislocation of trade, 106; exports and imports of, 45, 77, 126; gold redemption in, 105; foreign exchange, 121-133; loans of, in United States, 67, 128; war debt of, 133-141; forms of debt, 138; soundness of her credit, 90, 111, 120; ability to carry debt, 141.
- Greece, 155.
- Havenstein, 259, 274.
- Hefferich, K., 12, n., 18, n., 22, n., 23, 32, n., 51, n., 194, 205, n., 272, 273, 254, n. 2, 272, 273.
- Hertzegovina, 154.
- Hoarding, in England, 97; in France, 164; in Germany, 221.
- Holland, 30, 77, 132, 157, 223, 235, 240, 245, 252, 313, 342.
- Income, British, 78; French, 194; German, 59, 275.
- India, 102, 314.
- Industrial revolution, 1; industrial colonization, 6; gains of mechanics in, 7; of chemistry, 7; changed organization of business, 8; education, 8-9; rise of credit, 10; new technic, 23; common to many countries, 24; related to cause of war, 34.
- Inflation, 64, 115, 117, 118, 120, 148, 218, 230, 243, 247; British, 115, 117, 120; French, 166-168, 172, 173, 175, 176, 179; German, 206, 218, 224, 230, 243, 247; American, 347-353, 351.
- Italy, 30, 77, 79, 313.
- Japan, 109, 344.
- Jaurès, 152.
- Keynes, J. N., Jr., 91, n., 103, n., 104, n., 109, n.
- Kirkaldy, 96, n., 98, n., 105, n., 128, n., 131, n. 2.
- Kitchener, 39.
- Kriegskredit banks, 218.
- Kronprinzessin Cecilie, S.S.*, 291, 328.
- Krupp, 28, n., 259, 212.
- Labor, losses of, 52.
- Leroy-Beaulieu, P., 196, n.
- Liebig, 25.
- Liesse, A., 99, 163, n.
- Lloyd-George, 65, 92, 109.
- Loan bureaus, German, 213-218, 264-265, 268.
- Loans, at banks, not really limited by reserves, 40, 41, 51, 68, 111, 284; of Great Britain, 67, 128, 133-141; of France, 155, 167, 188, 191-196; of Germany, 59, 231, 258-263, 267, 271; of United States, 129, 339-340, 359-361.
- Lombards, 207, 209, 221.
- Loree, L. F., 127, n., 322, n. 1.
- Mexico, 154.
- Mitteuropa, 33, 37, 153, 199.
- Money, evolution of, 10; paper, 54; quantity of, 55; remedy in a crisis, 65; does not limit credit, 58, 60; credit drawn in terms of, 66; quantity theory of, 116-121, 348-350; English currency notes, 93-100; increase of, in various countries, 118-247; and credit in France, 148-149, 176-179, 182, 184; German theories of, 197, 202; effect of redemption on value of, 202, 248; inconvertible, in Germany, 204, 237, 248, 268; Aldrich-

- Vreeland notes in United States, 299-305; confusion of monetary and fiscal functions, 54, 99, 176-177.
- Moratorium, English, 86, 91, 109, 111; French, 159-162, 164, 165, 167, 168; German, 224-227; evil of, 160; relation of, to credit, 226.
- Morgan, J. P., & Co., 67, 188, n.
- Morocco, 152, 154, 200, 204.
- Norway, 30, 77, 107, 132, 223, 240.
- Noyes, A. D., 196.
- Ottawa, 103, 104, n., 122, 329, 330, 332.
- Paish, Sir G., 115, n. 2.
- Palgrave, Sir R. H. I., 97, n., 100.
- Parquet, 80, 156, n., 170; closed, 157.
- Prices, in England, 115-121; in France, 181-183; in Germany, 222, 243-249; causes of high, 248; and credit in United States, 348, 352.
- Quantity theory, *see* Money.
- Redemption, immediate and ultimate, 61, 63, 105, 118, 130, 151, 180, 202, 236, 248.
- Reichsbank, *see* Imperial Bank of Germany.
- Ribot, 167, n., 195.
- Rödern, Count von, 263, 273, n. 2.
- Rouvier, 152, n.
- Rumania, 51, 155.
- Russia, 30, 31, 43, 77, 153, 200, 212, 221, 234, 250, 286, 339, 343; comparative growth of, 14, 15; trade of, 30, 245; policy of, 37; finances of, 55, 154; paper money of, 174 n.
- Savings, in England, 97; in France, 146, 193-194; in Germany, 267, 268; in United States, 354-358.
- Seligman, E. R. A., 136, 272, n., 348 n.
- Serbia, 37, 51, 154-155, 220, 241, 285.
- Shantung Railway, 34.
- Sherbrooke, Lord, 100, n.
- Siemens, 7, 25.
- South America, 30, 109, 154, 212, 258, 286, 314; trade of, 74; with United States, 314-317; exchange on, 317-319, 344-346.
- Sprague, O. M. W., 325, n., 326, n. 2.
- Stock exchange, crisis on English, 80; closed, 81; French, 156, 157, 169-170; German, 220; in United States, 288, 321.
- Sugar, 20.
- Sweden, 77, 107, 132, 223, 240, 245, 252, 342.
- Switzerland, 132, 223, n. 3, 240, 245, 251-252, 342.
- Taxation, 41, 43, 56; versus loans, 134-135; in Great Britain, 41, 134-136; in France, 156, 195; in Germany, 253, 272, 273.
- Textiles, 20, 107, 158.
- Thomas, Sidney Gilchrist, 7, 19, 24, 25.
- Trade, of Great Britain, 106-109, 126; with Germany, 30-32, 97, 106; of France, 132, 186; of Germany, 30-32, 77, 222-224, 244; of United States, 289, 306-319; with South America, 74, 314-317.
- Transportation, cheapened, effect of, 3-5; ocean, 5.
- Treasury bills, British, 91, 137-138; French, 191; German, 228.
- Treasury, notes, German, 203, 227, 232, 261, 269.
- Turkey, 23, 31, 37, 154, 200, 212, 234.
- United States, comparative growth of, 14, 15, 17, 30; why in war, 38; in Civil War, 55, 177; demand for goods of, 57; dependence of, on European credit, 279-281; debt of, to Europe, 281; depression in, before the war, 282; attitude of Congress to business in, 232; exports of gold from, 282, 290, 291, 296, 328-336, 337; gold imports to, 337-341, 348; selling of securities of, 113, 127, 283, 285-288, 320-322; foreign exchange in, 283, 292, 319-

346; effect of war on credit in, 284, 292, 296; credit system of, 284, 296; stock exchange in, closed, 288; opened, 321; upheaval of trade, 289, 293, 306, 317, 335; exports of, 308-314, 318, 325, 333; imports of, 289-290, 306-307, 314, 317; shipping of, 291; effect of war on industry, 293; on savings, 356; banking in, 294-296, 298, 303, 305; hoarding of banks in, 334; Aldrich-Vreeland notes, 299-305; bank notes in, 301; crisis in, recovery from, 305; cause of crisis, 306; cotton, 309-312; iron and steel, 312; New York City loan,

330; Gold Pool, 331-333; inflation in, 347-353, 351; readjustment to war, 337; loans to Allies, 67, 129, 339-340, 359-361; international balance-sheet of, 341; advantage of gold stock to, 347; prices and credit in, 348, 352; governmental credit of, 357-361; wealth of, 355.

Wants, 47.

Wealth, British, 78; French, 194; German, 238, 275; of United States, 355.

Withers, H., 40, n., 86, n., 89, n., 93, n., 95, n.